Extreme IT: Tech pros in Iraq and Afghanistan battle 110-degree heat, 'moon dust' and mortar attacks to keep the lines of communication open. PAGE 15

COMPUTERWORLD®

What do IT workers want most? More than 31,000 of them told us they want fair pay, challenging work and ample opportunities, plus something special to keep them happy, engaged and loyal. Our 15th annual list pinpoints the employers with the right stuff. **PAGE 18**

100 BEST PLACES TO WORK IN IT 2008

JUNE 30/JULY 7, 2008 VOL. 42, NOS. 27/28 $5/COPY

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Inside

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■ NEWS DIGEST

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6 Windows XP won't disappear from **new PCs**, despite going into **end-of-life** mode. | A new **mini refrigeration system** could yield major **PC cooling** advancements.

8 A health insurer creates an app that lets members access **medical records** on their **cell phones**.

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100 BEST PLACES TO WORK IN IT 2008

Companies like **Quicken Loans (No. 2), Cox Enterprises (No. 17)** and **Raytheon (No. 65)** have figured out how to build and sustain stellar IT workforces. **Learn their secrets in our 15th annual report.**

34 How We Chose the Best Places. We collected data from the employers, plus satisfaction ratings from more than 31,000 IT workers to rank the top 100 organizations.

41 Scorecards. See which of the top 100 offer the most benefits, training and more. Also, find out what's important to IT workers at the top 100.

MORE ONLINE

www.computerworld.com/bp2008

Opinion: Columnist Katherine Spencer Lee offers five tips for attracting and retaining Gen-Yers.

Sort the top 100 list, based on the criteria that matter most to you.

See which organizations offer the best benefits, training and more.

Share your views. Tell us why some employers will never make our list.

20 Capital Group (No. 1)

From lunchtime on the lawn to intensive get-to-know-you interviews, this investment firm has combined its prime California location with the best of IT team-building to earn our top spot.

The Employers That Made The 2008 List

■ Aetna Inc. ■ Aflac Inc. ■ Allstate Insurance Co. ■ American Express Co. ■ American Fidelity Assurance Co. ■ AmTrust Bank ■ Anheuser-Busch Cos. ■ Antares Management Solutions ■ Apollo Group Inc. ■ Automotive Resources International ■ BAE Systems ■ BNSF Railway Co. ■ Booz Allen Hamilton Inc. ■ CA Inc. ■ Capital Group Cos. ■ CarMax Inc. ■ Caterpillar Inc. ■ CDW Corp. ■ Cerner Corp. ■ CME Group Inc. ■ Comerica Inc. ■ Commonwealth Financial Network ■ Constellation Energy Group Inc. ■ Cornell University ■ Cox Enterprises Inc. ■ Cummins Inc. ■ Discover Financial Services LLC ■ DTE Energy Co. ■ Duke University Health System & Duke University Medical Center ■ Edward D. Jones & Co. ■ Englewood Hospital and Medical Center ■ Ernst & Young ■ Exelon Corp. ■ Fairfax County Public Schools ■ FedEx Corp. ■ Financial Industry Regulatory Authority Inc. ■ First National of Nebraska Inc. ■ Genentech Inc. ■ General Mills Inc. ■ Grant Thornton LLP ■ H. Lee Moffitt Cancer Center & Research Institute ■ Hilton Hotels Corp. ■ Intermountain Health Care Inc. ■ JM Family Enterprises Inc. ■ KPMG LLP ■ Maritz Inc. ■ Marriott International Inc. ■ MGM Mirage ■ Monsanto Co. ■ Mount Carmel Health System ■ National Information Solutions Cooperative Inc. ■ National Rural Electric Cooperative Association ■ New York-Presbyterian Hospital ■ Northern Trust Corp. ■ Norton Healthcare ■ OCLC Online Computer Library Center Inc. ■ Palmetto Health ■ Partners HealthCare System Inc. ■ Paychex Inc. ■ Penn National Insurance ■ Pfizer Inc. ■ Principal Financial Group Inc. ■ Publix Super Markets Inc. ■ Qualcomm Inc. ■ Quest Diagnostics Inc. ■ Quicken Loans Inc. ■ Quintiles Transnational Corp. ■ Rackspace US Inc. ■ Raymond James Financial Inc. ■ Raytheon Co. ■ Sacramento Municipal Utility District ■ San Diego Gas & Electric Co. ■ SAS Institute Inc. ■ Scottrade Inc. ■ Securian Financial Group Inc. ■ SEI Investments Co. ■ Southern California Edison Co. ■ Southern Co. ■ State Farm Insurance Cos. ■ State Street Corp. ■ Sun Microsystems Inc. ■ Sutter Health ■ Tellabs Inc. ■ Temple University ■ Texas Health Resources Inc. ■ Texas Instruments Inc. ■ The Boeing Co. ■ The Chubb Corp. ■ The George Washington University ■ The Mitre Corp. ■ The Northwestern Mutual Life Insurance Co. ■ T-Mobile USA Inc. ■ U.S. Postal Service ■ United Parcel Service of America Inc. ■ University of Miami ■ University of Pennsylvania ■ USAA ■ USinternetworking Inc. ■ Verizon Wireless ■ VHA Inc.

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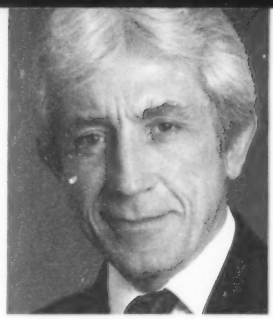
■ EDITOR'S NOTE

Don Tennant

Taming the Beast



EACH YEAR when *Computerworld* releases its list of the 100 Best Places to Work in IT, certain themes emerge that serve as valuable take-aways for any IT organization that's eager to recruit and retain the best employees. Perhaps because it's been top-of-mind with me lately, the theme that jumped out at me this year is the value that top IT shops place on collaboration and interaction.

I pored over our 2008 Best Places special report not long after having written last week about the need to challenge the notion that IT lends itself to a culture of isolationism. Citing reader comments posted on our Web site in response to an interview on the subject of why women leave IT, I suggested that there is a widely held conviction among IT pros that working in seclusion tends to be, as one reader put it, "the nature of the beast."

Yet when you read about the companies that IT employees see as the best places to work, you find that a culture that isolates individuals is inherently foreign to those places. Consider the following:

■ Julia King writes that Capital Group, No. 1 on the list, has a "highly collaborative, input-driven, collegial culture."

■ Robert L. Mitchell found that the IT department at Quicken Loans (2) has a "collegial family atmosphere," and that the culture is centered on team-building and favors personal interaction over e-mail and IM exchanges.

■ Thomas Hoffman writes about a "kind of kinship that exists among the 125 IT staffers" at Mount Carmel Health System (9).

■ A core value at VHA (12) is to encourage employees to be collaborative.

■ USinternetworking (48) has a high return rate among employees who have left the company for ostensibly greener pastures. Says project manager Bob Dorman: "I truly missed the camaraderie."

■ Aetna (78) has a team bonus program that enables workers to increase their bonuses based not only on individual performance, but also on their ability to work collaboratively in a team.

■ Steve Reed, a senior systems engineer at Publix Super Markets (79), says the long tenures of his team members have created a camaraderie that's "second to none."

■ Eighty-one percent of the 31,317 IT workers from this year's 100 Best Places who responded to the employee portion of the survey said they work in a team-oriented company or department.

■ Ninety-five percent of those respondents said they have good relationships with their co-workers.

■ A culture that isolates individuals is inherently foreign in companies that IT employees rate as the best places to work.

Also noteworthy is that Marriott International (29) offers a leadership development program that provides ongoing mentoring. Such a program flies in the face of comments from other readers I cited in last week's column. "I have never, ever had a mentor," wrote one, who said he'd been in the software industry for over 20 years, and who added that he'd never had a role model, either. Wrote another: "If you need a 'mentor' in IT, you weren't cut out for it."

Really? Is that the nature of the beast as well? If you think so, you might consider what Xerox Chairman and CEO Anne Mulcahy has to say on the subject.

In an interview I conducted with Mulcahy earlier this month, she suggested that we need to think of mentoring in a nontraditional way.

"We've got to be broader and wider in terms of the people who we consider mentors," Mulcahy said.

"Mentoring can come from all sorts of sources — your peers, people who work for you, can be great sources of learning and opportunity," she explained. "One of the most powerful ways for people to get promoted is for there to be a groundswell of people beside you and who work for you that think you're terrific. That's a lot more powerful than having one senior person whose radar screen you're on."

What it all boils down to is that you can tame the IT career beast, but you can't do it in isolation. Consider that a lesson learned by the IT pros who work in the best places. ■

Don Tennant *is editorial director of* Computerworld *and* InfoWorld. *Contact him at don_tennant@computerworld.com, and visit his blog at* http://blogs.computerworld.com/tennant.

■ ONLINE CHATTER

RESPONSES TO:

The iPhone vs. IT's Culture of 'No'

June 16, 2008

Frank Hayes writes that users are "champing at the bit to get their new iPhones running all over our systems." OUR? There is the age-old problem, forgetting who you are working for.

■ **Submitted by:** *Anonymous*

I've never understood why IT departments that are so afraid product X, Y or Z won't be secure enough for the enterprise insist on using three of the most buggy, insecure products on the market: Windows, Exchange & Internet Explorer.

■ **Submitted by:** *D. Ray*

The typical security department is well meaning but risk averse.

IPhones provide incredible usability. We should want to see them in the enterprise. IT as the department of NO is not good for business.

■ **Submitted by:** *Anonymous*

This article is spot on. I cannot believe how ridiculous analysts are in predicting iPhone corporate access failure. I remember when RIM launched the BlackBerry, it took years for large corporations to come close to accepting them. The applications developed for the iPhone will eventually force the business to put pressure on IT. At the end of the day, it is the business that foots the IT bill, so IT really doesn't have the control they so desperately want anyway.

■ **Submitted by:** *Anonymous*

RESPONSE TO:

Editor's Note: Teaching People to Think Can Be Risky

June 16, 2008

Puleeeez. The initial response gives NO indication of being humorous, and the backpedaling in the follow-up e-mail is totally transparent. Don, you were right the first time: using women as eye candy is demeaning and inappropriate.

■ **Submitted by:** *E. Gray*

JOIN THE CHATTER! *You, too, can comment directly on our stories, at* **computerworld.com**.

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Meet Tomorrow's Mobile Phones: Sensational Shape-Shifters And More

Here's an inside look at the exciting new world of form-fitting, highly intuitive, very personal mobile phones that will replace today's cookie-cutter models.

Beeps, Blips and IT: Making Sense of Sensor Data

As sensors proliferate in every industry, companies are struggling to turn the fire hose of real-time data into usable business intelligence.

Five Things You Should Never Tell Your Boss

As an IT pro, you know that information is power, but remember that discretion is the better part of valor. While keeping your boss in the loop is key, there are certain things you don't want to tell him – ever. We asked CIOs what kinds of things they never want to hear.

Will Gadgets Make Knowledge Obsolete?

Mike Elgan says that sooner or later we'll have to address the fact that nearly all knowledge is available to everyone, instantly, at any time. It could free us to do what we do best – think critically and creatively.

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News Digest

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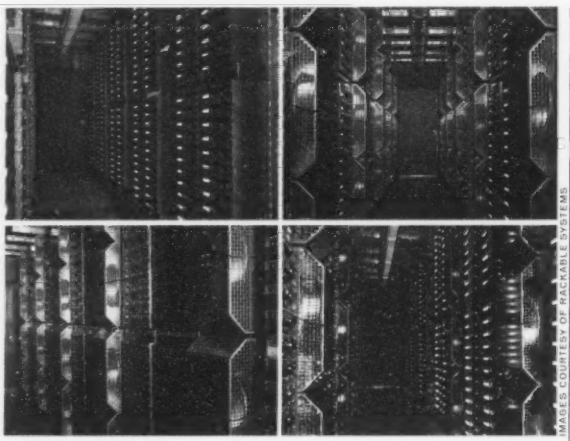
THE WEEKS AHEAD

JUNE 30: Microsoft plans to stop licensing Windows XP to PC makers and end retail shipments. (See story, page 6.)

JULY 1: Oracle is scheduled to hold a webcast on its plans for the middleware it acquired when it bought BEA Systems.

JULY 7: Microsoft opens its Worldwide Partner Conference in Houston. The list of speakers includes CEO Steve Ballmer.

JULY 11: Apple is due to release its new iPhone 3G model.



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« A single shipping container can hold as many as 2,000 servers.

DATA CENTERS

Microsoft Sees More Pros Than Cons in Containers

MICROSOFT CORP. continued its show of enthusiasm for container-based systems last week, with one of its data center officials saying that the modular and portable IT setups have a key role to play in meeting the demand for online services.

But the container-based approach has some potential drawbacks, acknowledged Daniel Costello, Microsoft's director of data center research. For instance, IT vendors are still filling shipping containers with equipment that was designed for traditional data centers. "Moving forward, we need to design systems specifically for this form factor," Costello said.

Other cons include higher costs from server failures if the power to a container is cut off, Costello said during a speech at the Structure 08 conference in San Francisco.

There are also questions about whether containers can be refurbished after their typical 10-year life span, or if they need to be discarded. In addition, the containers now available may not be able to handle servers from multiple vendors because of size differences, Costello said.

Robert Moya, a technical facilities manager at one of Stanford University's data centers, also pointed to the inability to install servers from different vendors as a drawback. And he noted that the narrow space between the racks in containers can make it hard for IT staffers to work side by side.

Nonetheless, Microsoft is convinced that containers will be widely deployed. "We used to talk about a PC on every desk," Costello said. "But how about a data center in every town?"

Microsoft has said it plans to put up to 220 containers, each holding as many as 2,000 servers, on the first floor of a new data center near Chicago. And the company's Virtual Earth online service is already being controlled from a portable data center located in Colorado.

Vendors such as Sun Microsystems Inc. and Rackable Systems Inc. are selling container-based systems now, and IBM said in June that it would start doing so as well.

Buying 2,000 servers preconfigured in a container is more cost-effective than manually installing separate racks of systems, Costello said. He added that Microsoft sees containers as a "primary packaging unit" for systems, not just a way to add extra computing capacity on short notice.

— James Niccolai, IDG News Service

WEB 2.0

Cisco Chief Bullish on Virtual-World Technology

DURING A VIRTUAL press conference held in Second Life last week, Cisco Systems Inc. CEO John Chambers acknowledged that companies are in "the very, very beginning stages" of using virtual-world technologies for business purposes.

But through his look-alike avatar (see image below), Chambers predicted that the business use of technologies such as Second Life will eventually "explode."

"It's the very front end of a very large wave of opportunities," he said.

Cisco itself has a substantial presence on Second Life, and it has created an internal virtual world for use by its channel partners.

But some analysts and virtual-world proponents see possible signs of trouble for the technology, such as companies shutting down or abandoning their virtual locations because of a lack of interest among customers.

– MATT HAMBLEN

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OPERATING SYSTEMS

Microsoft Says No More Reprieves for Windows XP

MICROSOFT CORP. last week laid to rest rumors that it might reconsider its decision to pull Windows XP from retail shelves and stop licensing the seven-year-old operating system to PC makers as of June 30.

In a letter to customers, Bill Veghte, senior vice president of Microsoft's online services and Windows business group, reiterated that the deadline for stopping most sales of XP wouldn't be pushed back any further. The company had already given the operating system a five-month reprieve, after initially planning to pull the plug on it at the end of January.

But the lack of another extension doesn't mean that XP will disappear from new PCs right away.

For example, Veghte left the door open a bit to any computer maker that wants to continue selling new PCs with XP preinstalled. Under a previously announced policy, small shops that assemble PCs for customers can continue buying XP until the end of January 2009. Veghte wrote in his letter that the top PC manufacturers will be able to take advantage of that option as well.

But that may not end up happening: The four PC market leaders — Hewlett-Packard Co., Dell Inc., Acer Inc. and Lenovo Group Ltd. — have all effectively called a halt to their general sales of XP systems.

However, HP, Dell and Lenovo have said that they will continue to install XP Professional on at least some of their PCs as a "downgrade" option for buyers of Windows Vista Business and Vista Ultimate.

Under Microsoft's licensing policies, the downgrade rights enable users to run XP on new PCs and then switch to Vista later on without having to pay an upgrade fee to the software vendor. However, some PC makers may tack downgrade fees onto the cost of their systems (see FAQ).

Microsoft also said previously that makers of lightweight notebook PCs and low-cost desktops could continue installing XP Home until June 2010.

— *Gregg Keizer*

FAQ: XP FUTURES

Will XP still be available on PCs after June 30? Yes, to an extent. Microsoft is letting PC makers sell off existing system inventories. And users who buy Windows Vista can install XP instead via a "downgrade" clause.

How much will it cost to downgrade to XP? That depends. HP isn't adding a downgrade surcharge to the cost of Vista. Dell is offering free downgrades on some systems and charging $20 or $50 on others.

How long will Microsoft support XP? The company has said that "mainstream" support will end next April; fee-based "extended" support is due to continue until April 2014.

Short Takes

- Oracle Corp. has disclosed that it may seek damages of $1 billion or more in its lawsuit against SAP AG and its TomorrowNow Inc. services unit. The March 2007 lawsuit charges that TomorrowNow workers illegally downloaded data from Oracle's support Web site.
- SAP has agreed to pay i2 Technologies Inc., a maker of supply chain software, $83.3 million to settle a patent lawsuit that i2 filed against the ERP vendor in 2006. In addition, the firms agreed to license certain technologies to each other.
- Yahoo Inc. said it has fixed a vulnerability in its Web mail site that could allow a hacker to get access to personal accounts. Cenzic Inc., a Web application security company, discovered the cross-site scripting flaw.
- Progress Software Corp. plans to buy Dublin-based Iona Technologies PLC, a maker of SOA tools, for about $162 million. The deal is set to close in September.

HARDWARE

Purdue Developing Tiny Cooling System for PCs

RESEARCHERS AT Purdue University last week said they have developed a tiny refrigeration system that could be used to cool laptop and desktop computers within two years.

The technology should enable PC manufacturers to improve the cooling systems in traditional laptops and build much smaller computers, said Suresh Garimella, a professor of mechanical engineering at Purdue.

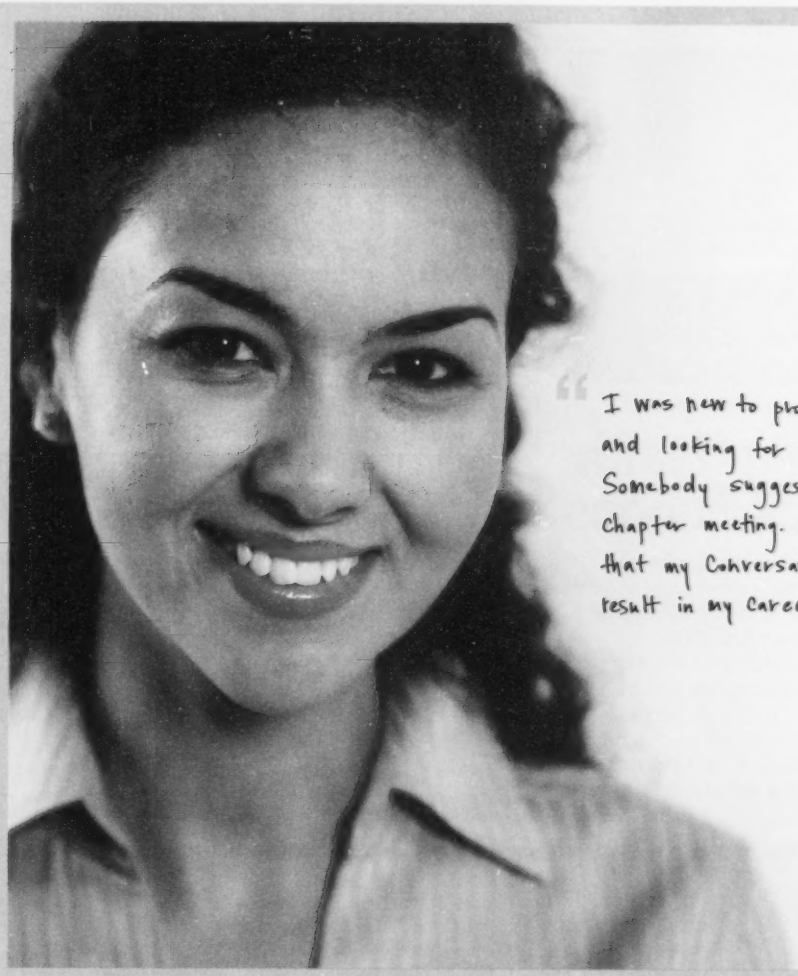
"Traditionally, you use a fan to blow air on a chip – room temperature air," said Garimella. "If I could push chilled air onto the chip, then I get a lot more cooling." The devices are designed to dramatically increase the amount of heat that can be removed from a computer, he added.

Suresh Garimella (right) and colleague Eckhard Groll work on their miniature cooling system.

The system pumps refrigerants through tiny compressors and tubing. The technology could be integrated into a microprocessor, or it could replace a computer's traditional air-cooled heat sink. The new cooling technique will probably be used first in gaming systems and then in high-end laptops, Garimella projected.

Dan Olds, an analyst at Gabriel Consulting Group Inc., noted that "keeping the heat down is crucially important in chips. It's a big deal, and something that manufacturers are dealing with from supercomputers on down."

– SHARON GAUDIN



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MOBILE & WIRELESS

Insurer Offering Health Records on Cell Phones

BLUE CROSS of Northeastern Pennsylvania is betting that its customers will want to keep complex personal health records on their cell phones, especially when they have to keep track of multiple doctors and medications.

The health insurer last month began rolling out a mobile application developed by AllOne Health Group Inc., a health care systems integrator, and Diversinet Corp., a maker of tools to activate and download mobile applications.

Drew Palin, chief development officer at the Blue Cross affiliate in Wilkes-Barre, Pa., said that so far, less than 10% of the 600,000 eligible users have tried the application, which is free to members.

Palin said he understands that users might have questions about the applications' privacy, but he contended that the benefits of the system outweigh the risks. And Blue Cross shares those concerns, he added, noting that the data in the system is encrypted and dual-factor authentication techniques are used to control access to that data.

Most of those who have used the mobile system so far are typical early adopters who are open to new technologies and have come to terms with the issue of privacy, said Palin.

Craig Mathias, an analyst at Farpoint Group, said that despite concerns about personal privacy, "all information will eventually be online and mobile."

— Matt Hamblen

BETWEEN THE LINES *By John Klossner*

BENCHMARKS LAST WEEK

The Internet Corporation for Assigned Names and Numbers voted to relax its rules on generic top-level domain names. ICANN's action means companies eventually could set up domains ending in their own names.

Microsoft Corp. released Hyper-V, the server virtualization software that it hopes will help it woo users away from VMware Inc.

FOUR YEARS AGO: MediaLive International Inc. canceled the 2004 Comdex trade show because of a lack of support from key IT vendors. The once-massive show was never revived.

Global Dispatches

NEC, Tyco Plan Japan-U.S. Cable

TOKYO – NEC Corp., based here, and Morristown, N.J.-based Tyco Telecommunications last week said they have begun joint planning work on the Unity undersea high-speed fiber-optic link between the U.S. and Japan.

The $300 million effort is funded by Google Inc., Bharti Airtel in New Delhi, Global Transit Communications in Kuala Lampur, KDDI Corp. in Tokyo, Pacnet Internet in Singapore, and Singapore Telecommunications Ltd.

The cable will initially contain dual optical-fiber cables for both primary service and backup. It will link Chikura, located off the Japanese coast near Tokyo, to Los Angeles and other sites on the West Coast. Martyn Williams, *IDG News Service*

Nokia to Acquire Symbian, Open Its Source Code

ESPOO, Finland – Nokia Corp. last week announced plans to acquire the 52% stake in Symbian Ltd. that it does not already own, for €264 million ($415 million U.S.).

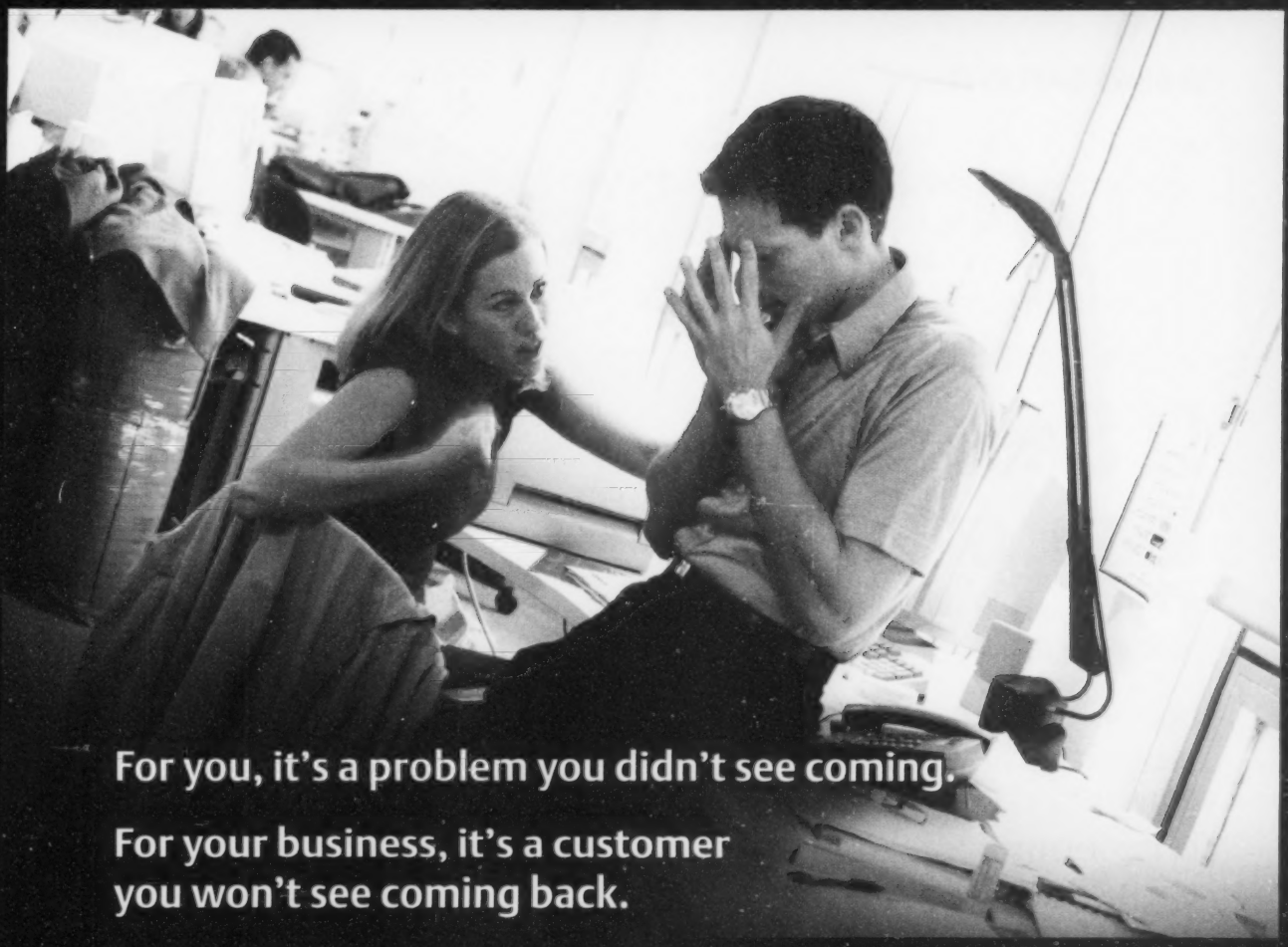
Once it completes the acquisition, Nokia plans to release the Symbian software to the open-source community.

The cell phone maker said that Sony Ericsson Mobile Communications AB, LM Ericsson Telephone Co., Panasonic Mobile Communications Co. and Siemens AG have all agreed to sell their shares in Symbian, a London-based maker of an operating system for mobile phones.

The final shareholder, Samsung Electronics Co., is expected to follow suit. Mikael Ricknäs, *IDG News Service, and* **Matt Hamblen,** *Computerworld*

BRIEFLY NOTED

Seoul-based Samsung Electronics and Munich-based Siltronic AG have opened a $1 billion (U.S.) factory in Singapore to produce 300mm silicon wafers for the chip industry. The joint venture, called Siltronic Samsung Wafer, will produce 300,000 wafers each month and employ 800 people by 2010. Dan Nystedt, *IDG News Service*



For you, it's a problem you didn't see coming.

For your business, it's a customer you won't see coming back.

You can't anticipate every problem. But Emerson Network Power and its Liebert power and cooling technologies can help you create an IT infrastructure that is ready for anything—unplanned outages, unpredictable growth or unexpected technologies.

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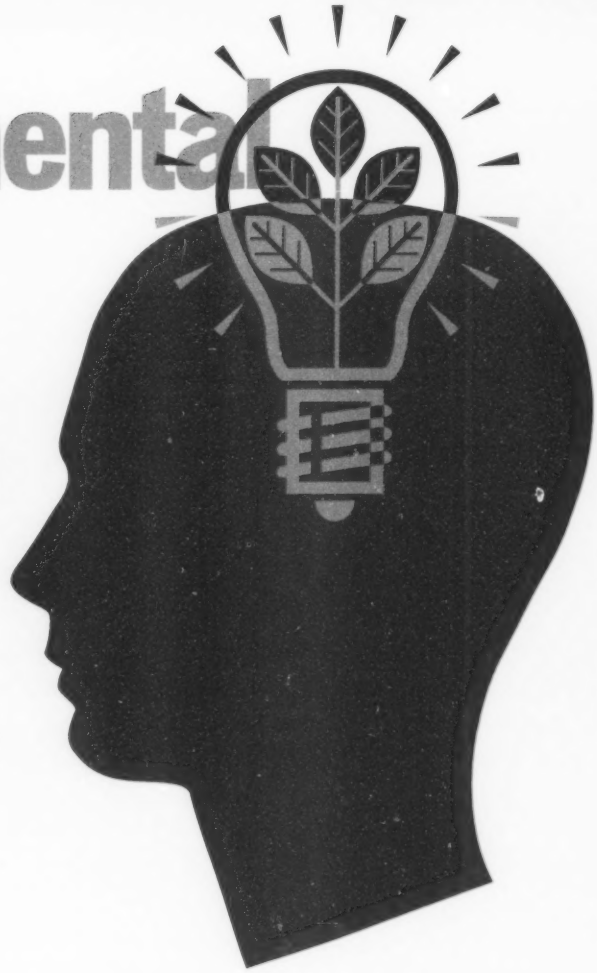
Environmental Impact:

IT Sees the Light on Green Computing



For some organizations, reducing the energy consumed by IT equipment is becoming a selling point with customers and even potential new hires.

By Patrick Thibodeau

WHEN ENTERPRISE Rent-A-Car Co. completes a move from PCs to thin clients this summer, as part of the rollout of a new rental transaction system, it expects to cut internal energy consumption by 5 million kilowatt-hours.

That will save about $500,000 annually while reducing the company's carbon dioxide emissions by 6.5 million pounds each year, according to Enterprise officials. Energy costs and consumption were considerations when planning for the new system began earlier in the decade. But they have grown in importance for Enterprise — so much so that the company issued a press release in April to let the public know how its shift to thin clients would help the environment.

That Enterprise would trumpet the environmental benefits of an IT upgrade says something about how going green is now viewed as a potential competitive advantage for companies. And the increasing focus on green computing as a marketing tool is giving new muscle to IT managers looking to make the case for steps such as upgrading to more efficient technologies, virtualizing servers and consolidating systems.

For instance, environmental concerns are reshaping Enterprise's approach to IT well beyond its installation of Hewlett-Packard thin clients. Six months ago, the St. Louis-based company set up a committee specifically to evaluate the environmental and energy-usage ramifications of IT purchases.

It also has measured the amount of power consumed by the servers, networking devices and other IT equipment in its main data center. Using a metric developed by The Green Grid, a vendor consortium that focuses on IT energy efficiency, Enterprise found that only 40% of the energy consumed within the data center was being used by IT equipment, as opposed to air handlers, cooling systems and uninterruptible power supplies.

By turning off unused equipment and better managing its cooling processes, the company increased that percentage to 44%. "Just by doing a few small things, we were able to move our energy efficiency up significantly," said Jim Miller, assistant vice president of IT. Now Enterprise is evaluating more extensive, and more expensive, efforts to improve the cooling systems in the data center, he added.

The municipal government in San Francisco is taking an approach similar to the one at Enterprise, as part of an effort to meet an IT energy-efficiency mandate issued by Mayor Gavin Newsom in February.

At this point, San Francis-

ISTOCK

co officials don't even know exactly how much the city spends to power its IT and communications equipment. But that didn't stop Newsom from promising that the government would reduce its IT-related emissions of greenhouse gases by 24% within four years.

Chris Vein, the city's CIO, is currently overseeing a project in which IT staffers are measuring the energy-usage levels of everything with a plug in some municipal buildings, in an effort to develop estimates that could be applied citywide.

Newsom's mandate also calls for Vein to develop a framework for considering the environmental impact of new technologies. One result is that desktop printers are out and network printers are in. The idea, Vein said, is that if workers have to walk down the hall to a printer instead of using one at their desks, they will likely do less printing. (See related story, at right.)

In addition, San Francisco is moving from a three-year refresh cycle on its laptops to a four-year cycle in order to keep them out of landfills for a longer period of time. And Newsom ordered that as of April 1 this year, all new PCs and monitors must have at least a silver rating under the Electronic Product Environmental Assessment Tool standard, with a gold rating being preferred. EPEAT, which was developed by the Green Electronics Council in Portland, Ore., is used to rate systems on the basis of their energy efficiency and use of environmentally friendly materials.

Vein, who was appointed as San Francisco's first CIO two years ago, hopes that the green computing push will also help him achieve his wider IT goals. He is moving to consolidate data centers, standardize technologies and increase the use of virtualization and online services — no easy task in a government with a history of departmental independence when it comes to IT.

At some organizations, the motivations for moving to greener systems are still grounded in the need to solve data center problems, not driven by environmental factors or marketing considerations. For instance, Denis Muras, a systems administrator at a medical facility that he asked not be identified, said his employer is installing blade servers and retiring older, less energy-efficient systems based on HP's discontinued Alpha processor.

> **"Just by doing a few small things, we were able to move our energy efficiency up significantly."**
>
> JIM MILLER, ASSISTANT VICE PRESIDENT OF IT, ENTERPRISE RENT-A-CAR CO.

Although the new servers are expected to generate savings on energy costs, Muras said the upgrades are being driven by a need to fit more computing capacity into a data center that's short on available space.

Moreover, using technologies that can increase the energy efficiency of systems isn't always feasible.

Jim Gordon, a senior network engineer at Computer Marketing Group Inc., which resells systems and manages them for customers, said that some of the Charlotte, N.C.-based company's clients would like to reduce their energy costs by using centralized power management capabilities to put their PCs into sleep mode during off-hours.

But, Gordon added, there's a problem: When systems running Windows XP "go to sleep, they don't always wake up" automatically. That can be a problem when IT workers try to apply software updates in the overnight hours, he said.

Despite such hurdles, Bob Carson, an IT manager at Reynolds Electric Co., an electrical contractor and IT services firm in Lima, Ohio, said he has seen a change in attitude toward energy efficiency among his IT customers over the past year.

At first, "a lot of my clients saw the green thing as an irritation," Carson said. But now they're measuring the energy consumption of systems as well as their total IT power costs, and using the data as a tool for selling business managers on the merits of new IT approaches and investments in energy-saving technologies. "Now," Carson said, "it's not just *my* [IT] budget, it's *our* budget."

Meanwhile, Enterprise isn't just touting its green computing exploits to the general public. The committee that's evaluating the environmental impact of new technologies includes a representative from the human resources department. Miller said the company has found that green computing is a strong selling point in attracting IT job prospects, and it wants HR to know what it's doing in that area. ■

San Francisco Aims to Be Green IT City by the Bay

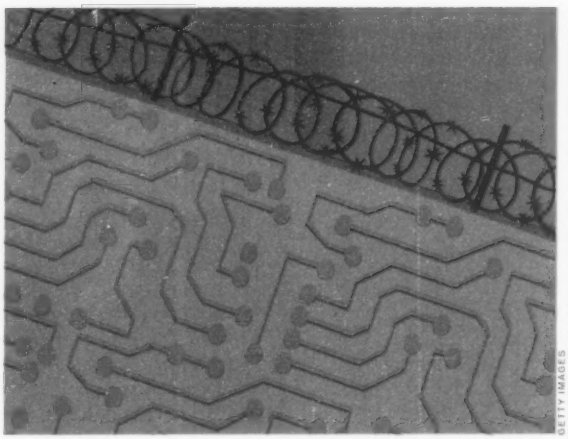
SAN FRANCISCO CIO Chris Vein was old-school in his office habits, often printing out even his e-mails – until he removed his desktop printer. That forced him to start using a network printer down the hall, and the walk was inconvenient enough to discourage him from printing as much as he used to. Now Vein hopes that a wider reliance on network printers, plus the deployment of a centralized document management system and tools for creating and sharing PDFs, will help San Francisco's municipal government meet a goal of reducing paper use in its offices by 20%.

In total, the city uses about 215 million sheets of paper per year, at a cost of $946,000 for the paper alone. The IT department recently started a pilot project to assess the effectiveness of the planned technology changes, plus the potential impact on server workloads as more documents are sent electronically. Another pilot project will evaluate the use of centralized power management tools for PCs.

Those are just two of the steps that San Francisco plans to take as part of an effort to make its IT operations more environmentally friendly, as mandated by Mayor Gavin Newsom. For Vein, though, the biggest challenge isn't the IT changes, but getting city workers to accept them.

"My job as CIO isn't really about technology; it's about organizational change," Vein said. "You really have to be creative in your marketing and selling of these concepts."

– PATRICK THIBODEAU


GETTY IMAGES

Microsoft Can't Claim Victory in Security Battle

In 2002, Bill Gates changed the way Microsoft develops software. But the company has had a harder time altering users' perceptions of how secure its products are.

By Jaikumar Vijayan

NEARLY SIX and a half years ago, in the aftermath of the 9/11 terrorist attacks and amid concerns about growing online security threats, Bill Gates sent out a company-wide e-mail at Microsoft Corp. that some people consider his most important internal memo ever.

Titled "Trustworthy Computing," the Jan. 15, 2002, missive stressed the need for Microsoft to focus on building more-secure products. "As an industry leader, we can and must do better," Gates wrote.

As Gates officially retires from his job at Microsoft, he leaves behind a company that by most accounts is doing better on security. But fully convincing users of that is an elusive goal. And increasing competition from Web 2.0 and software-as-a-service (SaaS) vendors is posing new challenges for the security development model implemented after Gates wrote his memo.

The memo set in motion a series of fundamental changes at Microsoft. It led to the creation of the company's Security Development Lifecycle (SDL) process, which was meant to ensure that flaws would be caught during development — not after products were released. Millions of dollars were spent to put every developer through SDL training, and work on Windows was shut down for 10 weeks while the training was done.

The marching orders issued by Gates also resulted in the monthly "Patch Tuesday" release schedule that Microsoft adopted in October 2003. In addition, his memo set the tone for a gradual thawing of the once icy relationship between the company and external security researchers.

Prior to penning the memo, "Gates was the biggest reason why Microsoft was having so many security problems," Gartner Inc. analyst John Pescatore said. "He was a market-driven guy who said that [customers] didn't want more security but more ease of use."

Pescatore added that Gates' "epiphany" drove changes not just at the technical level, but also in how Microsoft evaluated product managers, reviewed product performance internally and decided that software was ready to be released.

Despite all that has been done, though, it has been harder than Microsoft expected to convince corporate buyers that the company's software is in fact more secure than it used to be, said Khalid Kark, an analyst at Forrester Research Inc.

That's true in large part because numerous holes continue to be found in Microsoft products — even ones that have gone through the SDL process from the start, such as Windows Vista. This month, for example, Microsoft issued seven patches to fix a total of 10 security flaws. In February, it released 17 patches, the most since the previous February.

"I think the whole environment has gotten better," said David Jordan, chief information security officer for the Arlington County government in Virginia. "But we still have 'Terrible Tuesdays,' and sometimes patches to fix patches."

In his eyes, the problem is that by the time Gates took action, Microsoft was simply too big to quickly put top-down changes into effect. Gates "did the right thing," Jordan said. "But did he do it soon enough? No."

There is general agreement that bugs are inevitable and that Microsoft's massive user base makes it a big target for attackers. But the steady drumbeat of patch releases has tarnished the company's efforts to improve its security standing, according to Kark.

"I think they expected an overnight shift in terms of perception. It didn't happen," he said. "It's only now that we're starting to see Microsoft being recognized as a company that understands security issues."

Pescatore said a potential new problem is that the SDL process may not be flexible enough for the Web 2.0 and SaaS models. But, he added, Microsoft has yet come out with "a lighter-weight version of SDL for products on a faster life cycle."

And not everyone is convinced that Microsoft has done enough. David Rice, author of the book *Geekonomics: The Real Cost of Insecure Software*, said he thinks that security has only gone from being a "tertiary issue" at Microsoft to being an "ancillary" one. ■

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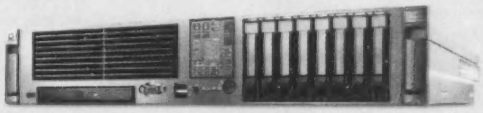

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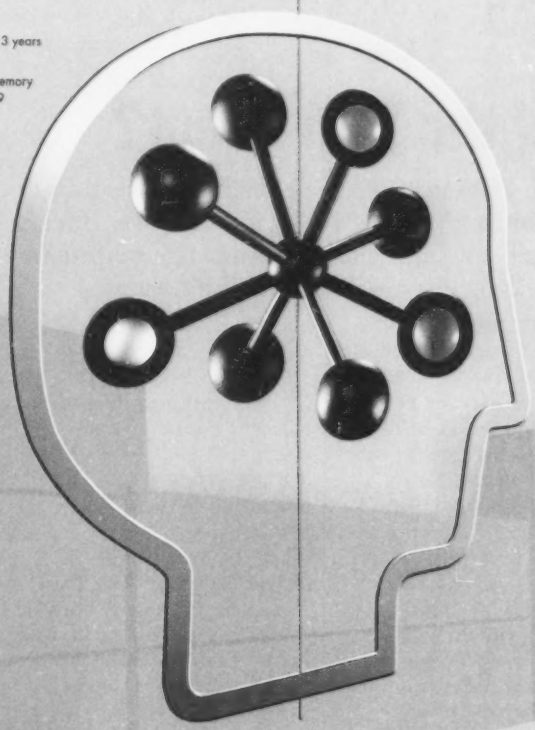

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On the Mark

HOT TRENDS ■ NEW PRODUCT NEWS ■ INDUSTRY BUZZ BY MARK HALL

MATTHEW FAULKNER

Year of the Thin Client?

2008 IS THE YEAR that CIOs will finally embrace thin clients. So argues Stephen Yeo, worldwide marketing director at thin-client maker IGEL Technology GmbH in Bremen, Germany. He backs up that assertion with five reasons.

Yeo suggests five ways to leave your PC.

First, virtual PCs can now run all the software users need. Thin clients tethered to terminal services technology are unable to run about 10% of all programs on the market, Yeo estimates. But with virtual PCs, that barrier is eliminated.

Second, compatibility problems with PC peripherals are a thing of the past, Yeo claims. Thin clients today have industry-standard connectors such as USB.

Third, a thin client, complete with its server and associated components, uses less than half the energy of a PC, according to the Fraunhofer Institute, also in Bremen.

Fourth, unless you're doing video editing on your desktop, anything beyond a quad-core CPU is overkill. But multicore CPUs are great for virtual PCs and thin clients, Yeo asserts.

Finally, IT has plenty of Windows XP licenses that can be moved to virtual environments. CIOs get to keep a beloved operating system and do some software recycling in the process.

Those may be reason enough to explain why Credit Suisse upped its growth projection for thin clients in 2008. And maybe, just maybe, a thin client will be on a desktop near you soon — perhaps your own.

Persistent PC Goodness

If thin clients don't march onto your companies' desktops this year, you can at least undo all the dumb things users do, from downloading dubious files to changing critical settings, claims Ken Fitzpatrick, chief marketing officer at Persystent Technology Corp. in Tampa, Fla.

The Persystent Enterprise Suite (PES) works during the preboot stage. According to Fitzpatrick, an agent in the boot process takes a quick glance into a partition that's invisible to the end user to see if anything has changed. If something is different from what you had set, PES reverts the PC to the desired state. PES never touches user data. "It guarantees a healthy PC every time you turn it on," boasts Fitzpatrick. And PES works whether a user is online or off.

You can save PC users from themselves, Fitzpatrick promises.

Next month, Persystent will add support for Windows Vista and offer integration with whole-disk encryption tools. Fitzpatrick says the company plans support for Linux, Macintosh and other operating systems. Pricing starts at $20 per year per device.

On-Demand Integration

Simon Peel acknowledges that "90% of SaaS integration is with on-premises applications," but he still sees a need for an appliance for SaaS-to-SaaS integration.

Peel is senior vice president of marketing and business strategy at Cast Iron Systems Inc., which makes appliances that are preconfigured for app-to-app integration. This month, the Mountain View, Calif., company released one that links your Salesforce.com service to your NetSuite on-demand app.

Integrate on-demand services with Cast Iron's appliance.

The appliance comes ready with API compatibility between the services. If you've done customization to either, Cast Iron's visual-mapping tool helps link those changes.

Whether you run it in your data center or as a service, it starts at $1,500 per month. ■

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Dossier

Name: Pat Dedham

Title: Lieutenant colonel

Organization: U.S. Army

Location: Recently returned from Bagram Air Base in Afghanistan

How he got where he is: "I was a computer science major. I joined the Army right out of college, and I've been in IT full time in the Army for almost 20 years."

Name: Don Fielden

Title: Lieutenant colonel

Organization: U.S. Air Force

Location: Balad Air Base, Iraq

How he got where he is: "I was always fascinated by electronics and radio as a kid. I enlisted in the Air Force in 1984 and became a radio technician. Eventually I went off to college and got a degree in physics, with an emphasis on electronics and magnetism. I came back in as a commissioned officer and requested to get into IT. I've been in for a total of 23 years now and loved every bit of it."

■ THE GRILL

IT in the Line of Fire

IT pros **serving in Iraq and Afghanistan** talk about **battling heat**, **'moon dust'** and **mortar attacks** to keep the lines of communication open.

Think your work is stressful? Try getting a network restored after it's been brought down by a mortar attack — in 110-degree heat.

That's life in Iraq and Afghanistan for the members of the U.S. military who are in charge of communications, networks and other IT systems. The desert environment presents challenges beyond the harsh realities of war, taxing both the equipment and the men and women who maintain it.

Here's a status report from U. S. Air Force Lt. Col. Don Fielden and U.S. Army Lt. Col. Pat Dedham, who have served in Iraq and Afghanistan, respectively.

U.S. Army. Lt. Col. Pat Dedham

U.S. Air Force Lt. Col. Don Fielden

Let's start with your location. Dedham: Until [recently], I was in Bagram, the largest base in Afghanistan. It's in a high-plains desert at 5,000 feet. The temperatures range from 0 degrees [Fahrenheit] in the winter to 110 degrees in the summer.

Fielden: I'm at Balad Air Base, the largest air base in Iraq. It's pretty flat and near sea level. Temperatures here range from 35 degrees in winter to 140 degrees in summer. It's very dusty and often windy. You know how stateside, when the wind is blowing, it makes it feel cooler? Here in Balad, when the wind's blowing, it feels a lot hotter.

How long have you served in the Middle East, and what is your role? Dedham: I was in Afghanistan for 15 months. As the director of comms [communications] and IT for the Joint Task Force, I had oversight of all IT and communications for U.S. forces.

Fielden: I've been in Iraq eight months so far, and I'll be out here for four more. I'm the commanding officer of the communications squadron here, which is the home of the 332nd Air Expeditionary Wing. Our wing also comprises other units that are scattered throughout Iraq, and I play a role in ensuring command-and-control connectivity to our other Air Force locations.

U.S. AIR FORCE/SENIOR AIRMAN JULIANNE SHOWALTER

"You know how stateside, when the wind is blowing, it makes it feel cooler? Here in Balad, when the wind's blowing, it feels a lot hotter.

What equipment are you working with? Fielden: We have a typical network control center that houses our file servers, routers and Internet switches, and another control center that handles circuit routing. And we have our satellite communication equipment and associated vans established on-site as well. We have Dell servers, Sun servers — the popular brands. It's a typical Air Force communications squadron, but operating in a forward location.

Dedham: We have a Cisco-based router network. On the transmission side, we're predominantly satellite-based, with everything from very small terminals — 2.4-meter dishes — up to huge dishes, in about 93 different locations. On the server side, it's a combination of Dell and Sun — the majority is Dell throughout Afghanistan.

Are mortar and rocket attacks an issue? Fielden: It's getting better. When I came out here last summer, it seemed like we were always hitting the deck. The attacks came several times a day and several times a night. But as the situation is stabilizing out here, the number of attacks has been reduced by about 50%.

Dedham: Just taking Bagram first, we had five different attacks in the 15 months I was there. One was a suicide bomber at the entry control point, and the other four were random mortar and RPG [rocket-propelled grenade] attacks on the base, none of which ever affected communications.

We did have forward operating bases, or combat outposts, lose connectivity because of a direct hit — on a satellite dish on two occasions, and on a generator. The command post nodes — little vans with satellite dishes on them and radio equipment associated with the satellite dish — were destroyed because of shrapnel from either RPG, suicide bomber or random mortar attack. We don't think the enemy was aiming for the command post; we think it was just a lucky hit.

How long does it take you to get a forward base back up when it's hit? Dedham: In those three cases, they had to switch over to "single-channel communications" — that's just radio. Tactical satellite radio or high-frequency communications had to wait until their network connectivity was re-established, which took anywhere from 24 to about 96 hours. It required us to airlift new terminals to those sites in a sling underneath a helicopter.

A lot of the terminals we use for network connectivity aren't in a van; they're modular cases that can be lifted by helicopter. They're very small, but they can provide network connectivity to those very small outposts.

What's the most challenging aspect of IT in your environments? Fielden: The heat in the spring and summertime, and the dust. One of our regular duties is to change the filters in the air conditioners and then dust. And dust. And when you think you're done, dust one more time. The vacuum cleaner is a critical piece of equipment out here.

Dedham: The dust is a huge problem. We refer to it as "moon dust" — it's not like the dust you might experience in the United States.

We had a call manager go bad one day. It had been in the system for a little over a year, and when we opened it up, there were literally 4 inches of moon dust covering all the circuit boards. The heat buildup caused a portion of one of the circuit cards to short-circuit and melt. Besides that, the dust gets into the fans, and they start to fail, which prevents the equipment from being cooled, which causes it to fail.

Dirty power [spikes and drops in electricity] is a huge issue, because you end up going through parts and life-cycling equipment a lot quicker than you do when you're in a nice, clean environment like the States. Routers go bad, switches go bad, just because of unregulated power, power surges and things like that.

What have you learned from your IT experiences over there? Fielden: That given the right people and the right motivation, you can make IT work anywhere in the world. Anywhere we need to have a U.S. military presence, we can get a robust information technology infrastructure in place, up and running, reliably providing services we're used to back stateside, very quickly.

Dedham: I've learned how significant information systems and networks can be in flattening information so it can get to everyone right away without having to follow any kind of bureaucratic hierarchy.

In a World War II movie, you see information move from team to squad to platoon to company to battalion to brigade to division. With IT, you can get it to everybody in real time. It makes a huge difference on the battlefield.

— *Interview by* **Jake Widman**

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100 BEST PLACES TO WORK IN IT 2008

The more than 31,000 IT workers we surveyed told us they want fair paychecks, challenging work and ample opportunities. Read about the 100 organizations, from points east to west, that deliver the goods.

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Flexible work schedules and comp time

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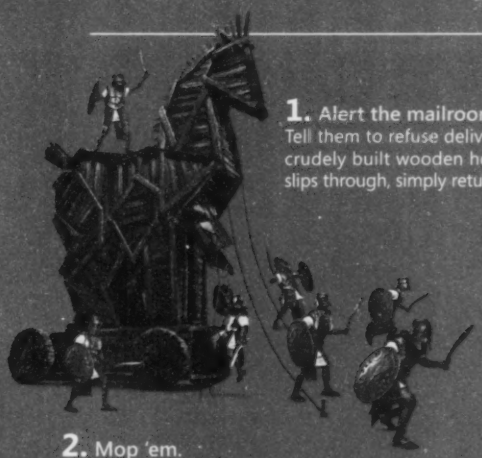

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

No. 1 Capital Group

This investment company earned the top spot by cultivating its IT workers. BY JULIA KING

IF YOU'RE an IT worker who thrives on competing with colleagues, takes pride in acquiring higher titles and believes that working crazy hours to meet a tight deadline is just part of the job, The Capital Group Cos. is the last place you'd want to work — and the last place that's likely to hire you.

But if you want a competitive salary, flexible working arrangements, a supportive and nurturing manager, extensive health and retirement benefits, even more extensive training and growth opportunities, and three weeks of vacation time to start, get hired at this 77-year-old privately held investment company, and you'll most likely want to spend your career there.

That's Vianney Stovall's plan.

"The company is so big and so open that you can do anything," says Stovall, who was hired as a desktop support associate a little over three years ago and is now a project management coordinator at Capital Group's headquarters in Irvine, Calif.

As an IT employer, Capital Group adheres to the same long-term philosophy and strategy that it applies to financial investments. It wants and expects workers to grow with the company over time. This makes hiring people who fit well with the company's highly collaborative, input-driven, collegial culture absolutely critical. It also helps explain the company's comprehensive interviewing process. Even candidates for a junior-level position must meet with six or seven staffers, each one focusing on a different area, such as strategy, communications or technical knowledge. Julie St. John, who 15 months ago was recruited from her CIO post at Fannie Mae, went through 40 interviews before joining the company as CIO and president of its investment technology group.

"Capital is very careful in their hiring. We're also very purposeful about how we think about interviewing," St. John says. "What I found in the interviews is incredible intellectual bandwidth, humility and integrity" among Capital Group employees, she says.

That rigorous attention to cultural fit is one of the things many people like best about working there. Employees regularly eat lunch together on the lawn or sit around the fountain that is the centerpiece of the new 40-acre Irvine campus. For those who'd like to sit and work in the Southern California sunshine, there is wireless access throughout the campus.

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NO. 3 FOR DIVERSITY
NO. 8 FOR TRAINING

Total employees	8,053
IT employees	1,607
IT turnover	4%
IT promotions	8%
Training days for IT	10
Women in IT	34%
Minorities in IT	48%

NO BLAME GAME

"What's unique about Capital is the very strong relationship between business and IT," says Clay Sterzik, a 15-year veteran of the IT organization. "They take the wins together, and they take the knocks together. You never hear anyone in the business say, 'They blew it in IT.' That's what makes morale so high on the IT side."

Rama Iyer, who manages the technology team that supports Capital's mutual fund activities, echoes this view. "There are any number of times a project can go south, even with the best of intentions. Almost never has the business pointed at IT and said IT screwed up," says Iyer.

But what really appeals to him is Capital Group's long-term view about investing in technology.

"Long-term is connected with whatever we do," Iyer says. As a result, he notes, IT is able to invest in technology and build systems that Capital Group might not need immediately but will need in the future. In the meantime, the IT teams can build them right the

The Capital Group IT team, from left to right: Rama Iyer, Julie St. John, Dave Beran, Chris Colwell and Janetta Stanek

SETH JOEL

first time, he says. "This is what makes my job a lot more fun," Iyer says.

That measured approach to technology investments and projects makes for better work/life balance, says Maurice Heffernan, who has been with the company just under two years and leads the investment systems group.

"Because of the long-term focus, there isn't this overly tactical emphasis on bursts of energy and stretches of long hours as the fallback strategy to get something done quickly," Heffernan says. "On a typical day, I wrap up at 5, get home to see my daughter and read her a bedtime story. And then, if I need to, I can get back online and talk to people in Singapore and Tokyo."

Capital Group invests generously and regularly in its roughly 1,600 IT workers, who, like a majority of Capital Group's 8,000 employees worldwide, rate the company's Master Retirement Plan (MRP) as one of its best benefits. The company establishes an account for each employee, or "associate," as they're known, as soon as they're hired. Every year, Capital Group contributes an amount equal to 15% of each associate's total annual cash compensation (including bonuses) to the account, up to the statutory limit of $33,750. Employees are fully vested in their MRP accounts after six years.

"The whole retirement-benefit package is phenomenal. I appreciate that more and more as I grow here at Capital," says Patricia Ong, a senior business systems analyst who has worked at Capital Group for 15 years.

HERE TO STAY

Not surprisingly, "people who come to Capital tend to stay at Capital," says St. John. The employee attrition rate is about 4% annually in IT.

People who come to Capital Group to work in IT are also likely to move into various roles around the company, since it has a track record of discovering and promoting talent from within. Each year, the company budgets $3,500 per IT employee for in-person training. IT workers are also reimbursed up to $5,000 annually for technical certifications they earn. All employees are eligible for 100% tuition reimbursement, up to $10,000 annually.

Right now, Sterzik is especially jazzed about the opportunity to help rewrite Capital Group's equity trading system. "We're in the first phase of rolling the system out. It's a brand-new, custom-built, state-of-the-art equity trading system, and it's the slickest system I've ever seen in my life," he says. "The team has done a great job."

Stovall, meanwhile, is considering her next career move at Capital Group.

"I definitely see this as a place to be long term, because there are so many directions I can take and areas I can go into," she says. "It's like your one-stop shop in terms of a career." ■

JAIME LEVEY

The Quicken team includes (front row, left to right) Terri Gruner, Jeff Hu, Janice Love-Ceesay, (back row, left to right) Karim Taleb, Jason Slater, Frank Laura and Matt Cowie

Quicken Loans Inc.

The **PERSONAL TOUCH** helps drive innovation

2 It's not the barbecues, Wii Bowling and Guitar Hero competitions, or even the free tickets to Cleveland Cavaliers games and concerts at the Quicken Loans Arena. Those things aren't what make Quicken Loans' IT department a great place to work. The perks are nice, says software architect Matt Cowie, but it's the collegial atmosphere, job flexibility and opportunities to work with leading-edge technologies that keep him from looking elsewhere.

Team-building begins in the office, where the culture favors personal interaction over more impersonal e-mail or IM exchanges. "We don't throw things over the wall. We base a lot of what we do on face-to-face communications," Cowie says. The IT staff works as a team and also plays as a team. Outings have included a bus trip to the 2007 NBA finals. Last year, IT managers rewarded staffers with more than 3,000 tickets to sporting events and concerts.

Even the offices of this Livonia, Mich.-based online mortgage lender are unique. "It's not your normal drab, gray environment," Cowie says. The Cleveland office was designed to look like a basketball court. (Quicken Loans' CEO owns the Cavaliers basketball team.)

Managers encourage innovation, even for ideas that may seem crazy at first, such as when a staffer demonstrated how to use a Wii controller to manipulate displays at meetings. Says Cowie: "The leadership gives us the ability to do that. I can't imagine anywhere else I'd want to be."

– ROBERT L. MITCHELL

3 GENERAL MILLS INC.

NO. 10 FOR TRAINING
IT promotions in 2007: 16%

Known for popular brands such as Yoplait and Wheaties, Minneapolis-based General Mills keeps finding new ways to reward its IT workers. A 10-member task force of IT employees created an Excellence in Technology award, which encourages recognition of day-to-day activities. In 2007, more than 40 employees received an award.

4 The Mitre Corp.

NO. 4 FOR TRAINING
NO. 10 FOR RETENTION

The **popular retirement contribution plan** at this not-for-profit science and engineering organization, based in McLean, Va., has a whopping 99% employee participation rate. The company provides generous matches of employee contributions.

5 SAS Institute Inc.

NO. 7 FOR RETENTION
NO. 2 FOR BENEFITS

This Cary, N.C., software company offers **a family-friendly package of benefits** to boost employee morale and well-being. Managers provide time off or create flexible work schedules so employees can meet family obligations.

6 UNIVERSITY OF PENNSYLVANIA

NO. 5 FOR DIVERSITY
NO. 8 FOR BENEFITS

This school's home turf – University City – is one of the most famous communities in Philadelphia. The school has its own museums, green fields, a regional rail station, sports teams, a newspaper and retail stores. Activities include a campuswide fundraising celebration and a 1,645-member lunchtime employee walking group called Penn Walkers.

7 JM FAMILY ENTERPRISES INC.

IT turnover in 2007: 7%
IT promotions in 2007: 8%

This automotive company's new "Associates Helping Associates" program was designed to provide assistance to employees facing hardship. Workers at the Deerfield Beach, Fla., company who have lost a loved one can get help with funeral expenses or use of the corporate aircraft. Those who have lost homes as a result of fire or flood are offered temporary housing.

8 Rackspace US Inc.

NO. 6 FOR RETENTION

"Rackers," as employees at this San Antonio-based managed hosting services company are called, enjoy **flexible hours and a casual dress code.** They are given 15 paid vacation days and one paid day off every year to perform volunteer work.

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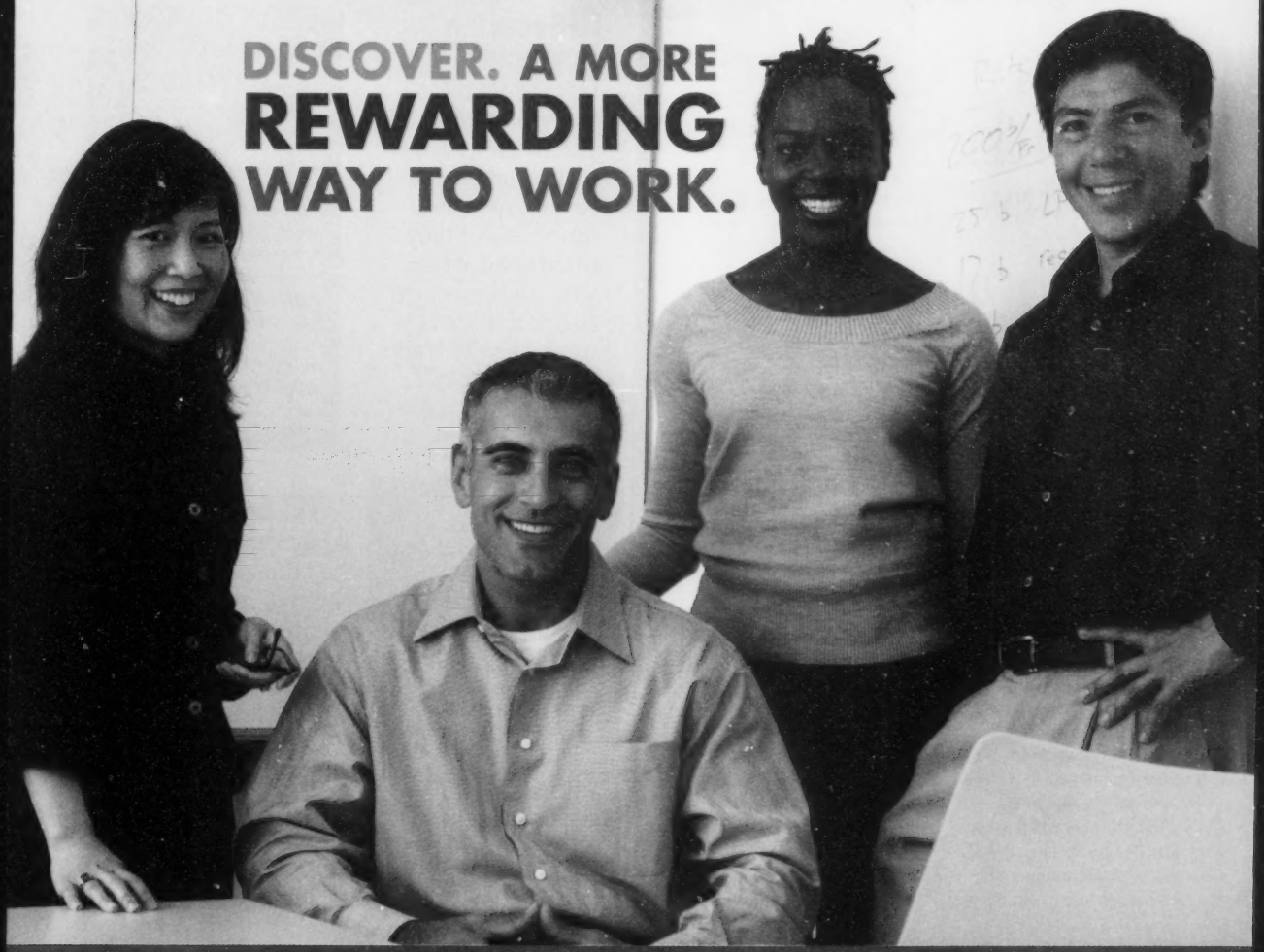

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Mount Carmel Health System

COMPASSION builds a solid family team

When Terri Roski's husband died a few years ago, her fellow IT workers at Mount Carmel Health System helped offset some of the funeral expenses. "I can't even begin to express my appreciation to them," she says.

Her co-workers' generosity demonstrates the kind of kinship that exists among the 125 IT staffers at the Columbus, Ohio-based medical services provider. "If someone's having a bad day or issues at home, we're a very caring department," says Les Boyer, director of applications support. "I think people appreciate the compassion that we have here."

To further cement that bond, the IT group puts together a mix of formal and informal gatherings throughout the year, says Gina Cook, director of project management. "I don't think you'd find that [level of closeness] in most departments to the extent that we have it here," she says.

But Mount Carmel's IT unit hasn't always been locked in a big group hug. When Cindy Sheets took over as CIO in 1999, IT's annual turnover rate was an abysmal 46%. "There was a lot of finger-pointing back then," says Sheets, who joined the company in 1989 as a systems analyst.

But since then, Sheets has helped nurture a more supportive environment, and turnover has fallen to less than 2% recently.

That family feeling extends into the IT organization's two-step recruitment process. Job candidates must first meet with a peer group of IT workers at Mount Carmel. "If the peer group doesn't recommend them, [senior managers] never see them," says Sheets.

– THOMAS HOFFMAN

University of Miami

10 NO. 5 FOR RETENTION

This top-notch university, located in Coral Gables, Fla., just outside of Miami, keeps piling on the benefits. New this year is a free retirement-planning service called LTSave that includes planning tools and expert advice. For a fixed annual fee, **employees can have their retirement assets professionally managed** at a fraction of the price charged in the commercial marketplace.

But the IT department's true claim to fame is its training program. Employees are offered a broad array of technical and managerial training opportunities. This past year, many IT staffers earned or renewed their certifications with vendors such as Microsoft and Cisco, and with organizations such as the ITIL Certification Management Board, BICSI, HDI and the SANS Institute. IT operates an Information Systems Institute for customers that IT staffers can also attend. Other job-relevant training is also provided.

11 Securian Financial Group Inc.

NO. 5 FOR TRAINING

Training is a key part of the worker satisfaction equation at this St. Paul, Minn.-based financial services and insurance company. Each IT worker had **13 training days in 2007,** and 16% of IT workers were promoted.

12 VHA INC.

Women in IT: 30%
Minorities in IT: 23%

The core values at this Irving, Texas, hospital cooperative encourage employees to be collaborative, adaptive and resourceful. Both senior business and IT leadership teams seek and respond to employee feedback, helping to improve the balance of work and home life for employees and enable the flow of innovative ideas.

13 MONSANTO CO.

NO. 1 FOR TRAINING

To help minimize the impact of a major road-construction project near its headquarters in St. Louis, this seed and biotechnology company is piloting an initiative called the Alternative Workplace Program, which gives employees who live in the city the option of telecommuting part time or working a flexible schedule. An extensive guide is helping IT maximize efficiency in this pilot program.

14 Sun Microsystems Inc.

Through an "open work" program at this computer giant, **employees can work wherever they want** — at home, at the office or even in a coffee shop. At the end of fiscal 2007, more than 55% of its staffers were working away from the office at least one or two days a week.

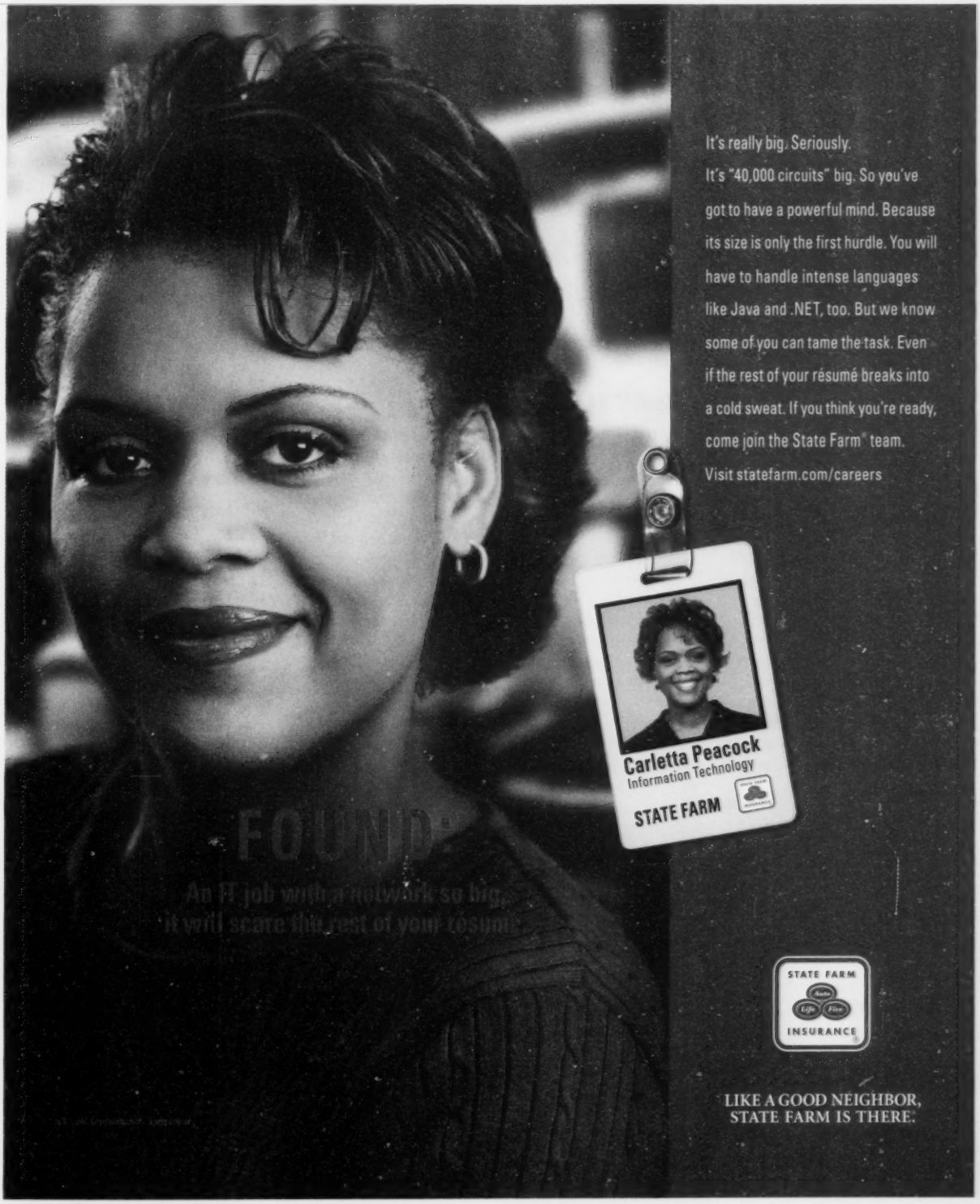
15 Qualcomm Inc.

It's hard to pick the best benefit at this San Diego-based wireless communications vendor. Employees can wear jeans to work and take company-sponsored trips to the ballpark and racetrack. They also get a **beefy benefits package** that includes free health care for them and their families.

16 SCOTTRADE INC.

Employees: 2,000
IT employees: 192

Everyone gets to recognize top performers at this St. Louis-based trading firm. Through the Above & Beyond program, IT workers earn points from peers for exceeding expectations. The points can then be traded in for prizes that range from gift cards to all-expenses-paid vacations. Quarterly bonuses are based on a combination of the company's and workers' performances.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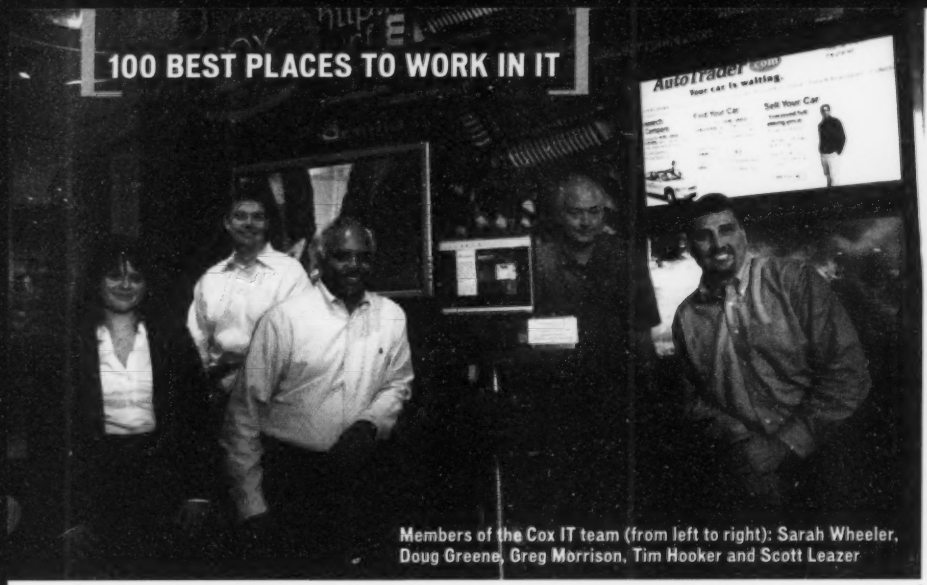

Members of the Cox IT team (from left to right): Sarah Wheeler, Doug Greene, Greg Morrison, Tim Hooker and Scott Leazer

Cox Enterprises

EMPOWERING employees is second nature here

17 It says a lot about the business world when "nice" is met with suspicion. But after Greg Morrison, CIO at Cox Enterprises Inc., finished his second interview seven years ago at the Atlanta-based diversified media company, he asked for a third meeting to confirm that the company wasn't too good to be true. "I couldn't imagine the environment being as nice as it seemed," he says.

The key, Morrison says, isn't found so much in Cox's written policies, although the company offers generous benefits, especially when it comes to tuition reimbursement and maternity leave. It's more what he calls a concerted effort to do the right thing for employees, customers and the community.

Sarah Wheeler, senior information architect, says opportunities for advancement are also plentiful. When she joined Cox seven years ago, she was a jack of all trades. But Wheeler soon found herself moving into the area of usability, which has grown from 30 to over 100 employees during her tenure. "I was able to shape my role and discipline inside corporate IT," she says.

The culture at Cox is so "nice," Morrison says, that it's not for everyone. "If you had an actively aggressive personal style, you'd fail miserably here," he says.

– MARY BRANDEL, *COMPUTERWORLD* CONTRIBUTING WRITER

18 KPMG LLP

Employees: 23,638
IT employees: 1,000

The IT workers at the smallest of the Big Four accounting firms have well-laid career paths. In April 2007, the New York-based firm rolled out the Employee Career Architecture program to help employees plan their professional development and career progression. The program goals are to empower workers and create a culture in which career development is a key priority.

19 Sutter Health

It's no surprise that **employee wellness is a top priority** at this network of hospitals and physicians. Sutter Health in Mather, Calif., offers its workers a no-cost wellness coaching benefit called "Live Well for Life." Workers who meet their objectives are eligible for a cash incentive bonus of $500.

20 USAA

Perks are as numerous as they are varied at this mutual insurance company in San Antonio. There's even **something for every sports enthusiast,** including intramural programs, fishing events, golfing cages and instruction, and jogging trails. USAA's three fitness centers boast saunas and personal trainers.

21 BAE SYSTEMS

IT turnover in 2007: 6%
IT promotions in 2007: 6%

Putting the right person in the right job is a key goal at this McLean, Va.-based defense market and IT services company. Its internal Assignments Management Panel plans and reviews existing and future staffing requirements for the company's many business lines and focuses on matching the best talent possible to each requirement, enabling successful employee transfers.

22 FedEx Corp.

The "Purple Pipeline" program at this Memphis shipping giant was designed to **strengthen the leadership skills of managers,** break down silos and create career opportunities. Five of the first-year participants were promoted to director, and two have been hired into new management positions.

23 PALMETTO HEALTH

IT promotions in 2007: 12%

Employees asked for a change – and got one. In 2007, Columbia, S.C.-based Palmetto Health made a major change to its merit-based salary-increase process. For the past 10 years, 3% increases across the board were standard. Now, employees who score well on standards of excellence and teamwork, and on an evaluation of their job responsibilities, can receive merit increases of up to 6%.

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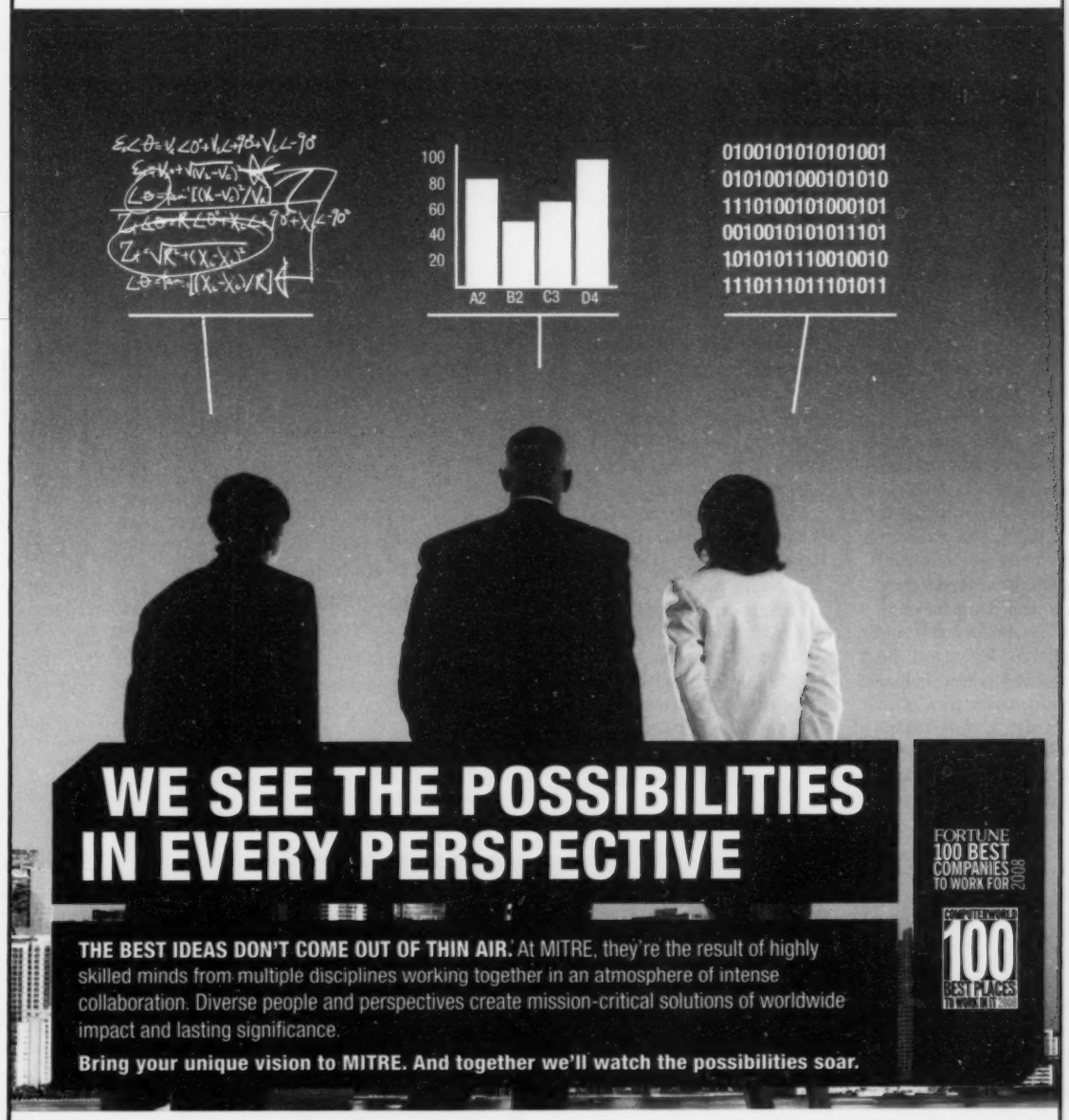

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American Express

Schedules are **FAST-PACED** but flexible

Banging on a drum while sitting in a circle with colleagues was the last thing Ileana Figueroa expected to be doing when she first joined the American Express Technologies (AET) group, the IT division of New York-based credit card and travel giant American Express Co.

"We do some wild team activities," she says, like the team-building exercise in which she learned to play the drums.

But that's just one part of employee development efforts that also include both technical and business training. "It's not just about technical training, but leadership competencies," says Figueroa, a vice president at AET and an 11-year veteran who worked her way up from the business side.

Although the day-to-day work environment is hectic, Figueroa says flexible work hours, telecommuting opportunities, compressed-workweek arrangements and a program that allows employees to "buy" up to one extra week of vacation time a year help her keep work and home life in balance. (Employees "purchase" the time through a program that prorates their salary.)

AET's focus on family also includes an emergency backup child care facility and on-site medical assistance. "As a mom, I am able to arrange my job so that I don't miss important events at home," Figueroa says. The company also offers community outreach programs, including a sabbatical program that pays AET staffers to donate their time to nonprofit organizations.

Figueroa says IT staffers are fully engaged with the business, both in daily work and in strategic planning. "We have a seat at the table," she says. "We're not just order-takers."

– ROBERT L. MITCHELL

American Fidelity Assurance Co.

25 Employees at this life and health insurance company have the amenities of a small city at their feet. Within the Oklahoma City campus are a free medical clinic, a fitness center and a restaurant. Yet the "All-Colleague" bonus still tops the list of benefits. Started about 12 years ago, the bonus is tied to the company's monthly financial scorecard. Workers can see whether the company is meeting projections and what it may take to push to new performance levels. **IT bonuses last year averaged approximately 26% of base salary.** From IT executives to data entry personnel, all workers participate in the bonus program.

26 Principal Financial Group Inc.

You can design your own schedule at this Des Moines-based financial services provider. The firm offers **an array of flexible scheduling options.** For example, workers can start or end their days earlier or later when they need to. Job-sharing and part-time positions are also available.

27 VERIZON WIRELESS

NO. 6 FOR TRAINING

Training days for IT: 12

This Basking Ridge, N.J.-based telecommunications company has traditionally offered on-site master's degree and undergraduate certificate programs for its New Jersey and New York locations. In 2006, it began offering the master of information systems from Stevens Institute of Technology and an undergraduate certificate in information systems from the New Jersey Institute of Technology.

Southern Co.

28 Ideas are gold at this Atlanta-based electricity distributor. Almost four years ago, the IT team developed a program to protect the company's intellectual property, **reward employees for their innovations** and reap additional value from that innovation. All employees who submit an idea to the IT team's IP program receive a commemorative medallion. If the invention is deemed patentable, each named inventor receives $500. If the patent is granted, each inventor receives an additional Inventor Award of $2,000. Inventors are also eligible for a percentage of royalties received for external commercial use or sale of a patented item.

Since the program's inception in 2004, 26 applications have been filed, with eight more in progress as of early this year, and 31 inventors have received a total of $74,500 in awards. The program exceeded all of its annual goals in 2007, with 81 submissions, eight inventions deemed patentable and $1.28 million in IP value.

29 MARRIOTT INTERNATIONAL INC.

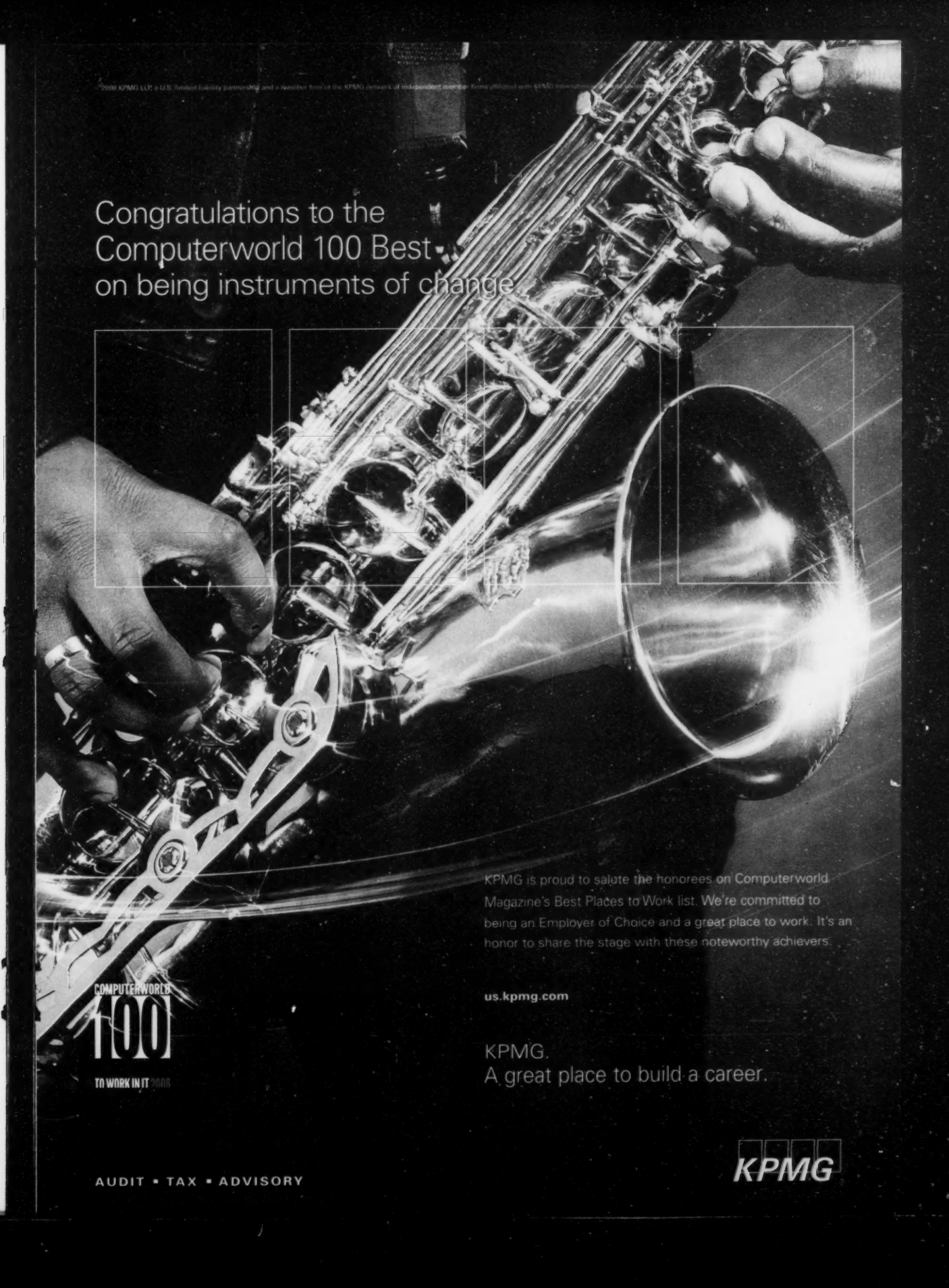
Women in IT: 31%

Minorities in IT: 33%

This global hotelier, with headquarters in Bethesda, Md., recently kicked off a leadership development program to enhance existing leadership skills and provide ongoing mentoring. The goal is to create a pipeline of future leaders. Participants can take courses throughout their careers as they grow and develop or change roles.

30 Partners HealthCare System Inc.

This Wellesley, Mass.-based health care provider empowers its IT team. **Partners' IT workers are driving or playing key roles** in all of the company's High Performance Medicine projects, which are patient-care-centric initiatives at the top of senior management's agenda.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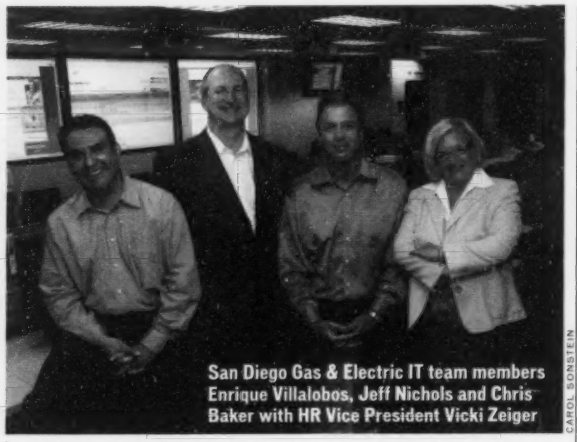

San Diego Gas & Electric IT team members Enrique Villalobos, Jeff Nichols and Chris Baker with HR Vice President Vicki Zeiger

CAROL SONSTEIN

San Diego Gas & Electric Co.

Hands-on access to **HOT TECHNOLOGIES**

31 Few people in IT would associate a power company with the use of pioneering technologies. But working hands-on with new and innovative systems has been one of the big draws for Jeff Nichols and many of the other 623 IT workers at San Diego Gas & Electric Co., part of Sempra Energy Utilities.

The director of networking and communications services says that, before joining San Diego Gas & Electric in early 2007, he thought the IT environment at the energy company "might be a bit sleepy. But it's not that at all – it's very cutting-edge," he says.

Hot projects include a $572 million initiative called Smart Meter. Slated to last through 2011, Smart Meter will involve replacing roughly 1.4 million electric meters and 900,000 gas meters with digital meters to allow San Diego Gas & Electric customers to manage their energy consumption more efficiently. The project includes using Zigbee wireless technology and service-oriented architectures, says Enrique Villalobos, an IT architect. The Smart Meter project "is very compelling" to work on, he says.

"There's interesting, transformative work that's going on here," adds Nichols. "For an IT guy, that's pretty big on the list."

The utility has also demonstrated its willingness to experiment with new technologies – even when they don't materialize into production systems. For instance, the company noodled with broadband-over-power-line technologies in 2006 and 2007 to determine whether offering such services to its customers in Southern California made sense. Company executives ultimately decided against the plan, "but it was a wonderful learning opportunity for our employees," says Vicki Zeiger, vice president of human resources.

The utility's willingness to expose its IT workers to new technologies represents a refreshing change from the way it used to be run. "Ten or 15 years ago, we were more on the tail end of using information technology," says Villalobos. Now, there's more willingness by company executives to conduct proof-of-concept work using leading-edge technologies such as SOA, he says.

– THOMAS HOFFMAN

32 Fairfax County Public Schools

The IT department at this Virginia school system (the nation's 12th largest) believes in **continuous, flexible learning opportunities.** Its professional development program features a Web-based application designed to manage ongoing training for each IT employee.

33 FIRST NATIONAL OF NEBRASKA INC.

Employees: 6,664
IT employees: 518

In June 2007, this Omaha-based financial services company kicked off its own version of the TV show *The Biggest Loser*, with a corporate weight-loss program. Almost 200 employees participated. Teams competed to accomplish weight-loss goals and were assigned personal trainers to assist with workouts, motivation and healthy eating. A total of 1,806 pounds were lost. First prize was a trip for two to a spa.

34 Aflac Inc.

This Columbus, Ga.-based insurer **makes life easier for workers with young children.** The company has two on-site child-care centers, with space for up to 540 children, making Aflac the largest provider of on-site corporate day care in Georgia. After-school pickup and homework assistance are also offered.

35 BNSF RAILWAY CO.

IT turnover in 2007: 4%
IT promotions in 2007: 13%

This Fort Worth, Texas-based freight company has launched a new business-centric curriculum for IT that includes coursework on topics such as vendor/supplier management, beginning and advanced finance, effective decision-making, strategic planning and project management. The program ensures that technical professionals are more broadly trained, leaving them better able to adapt to a shift to multi-vendor IT environments.

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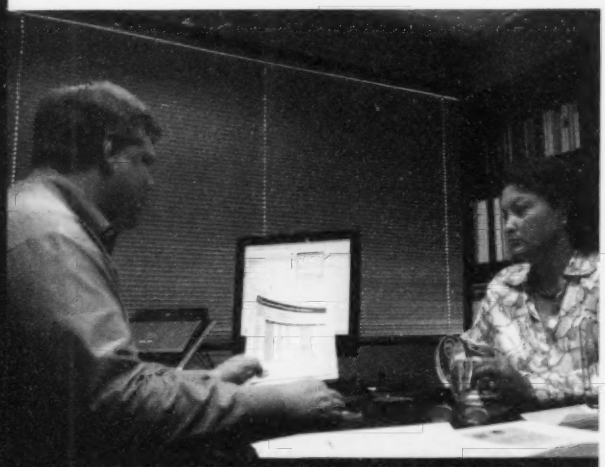

Ernst & Young CIO Andrew Walsh and Beatrice Fernandez

Ernst & Young

Helping workers achieve **BALANCE** at home and work

36 When Beatrice Fernandez talks with friends about her workplace, she finds herself bragging – not so much about the benefits package, which she says is on par with those of many other large firms. Instead, she boasts about something that for many companies is often more talk than reality: flexibility.

"I can work anywhere, anyplace," says Fernandez, a 10-year veteran at Secaucus, N.J.-based Ernst & Young, one of the auditing industry's Big Four. "I can be at my niece's softball game and have the tools to access the office if something comes up." Her friends' reaction, she says, is, "Wow, we don't have that."

Support for flexibility comes right from the top, with the executive board ensuring that managers promote it among employees, says Fernandez, director of technology enablement services. "We believe our technology needs cannot be met if IT professionals' lives don't work," says Renee Sussman, assistant director of technology communications and learning.

Another emphasis is inclusiveness, and according to Fernandez, E&Y succeeds in driving it into the culture.

"There's always been a push for diversity, but with inclusion, there's a difference," she says. "You can meet the quotas, but that doesn't mean you're including people with other cultures and lifestyles in the thought leadership of the firm." The topic of inclusion comes up in every meeting and often in the company's daily newsletter.

Fernandez says she's found her place at E&Y. "It's the whole package that's made the difference to me," she says. "I don't see myself going anywhere else."

– MARY BRANDEL

37 Quintiles Transnational Corp.
This contract research organization, with headquarters in Durham, N.C., **makes use of its global footprint**. Its 600 worldwide IT employees work in 27 countries, and all staffers, including those in the U.S., report into units with global responsibility.

38 GRANT THORNTON LLP
Training days for IT: 10

The process of hiring new workers at this accounting firm involves everyone – not just managers. Employees at Chicago-based Grant Thornton can interview job candidates to help determine whether a person is a good fit for the corporate culture and team. An interviewing board is made up of people who will be the peers of the new hire, meaning a candidate might interview with five to seven people.

39 THE NORTHWESTERN MUTUAL LIFE INSURANCE CO.
IT turnover in 2007: 4%
IT promotions in 2007: 14%

The IT unit at this Milwaukee-based life insurance firm has implemented a new resource center model for all staffers. Here's how it works: Each IT worker has two managers. One serves as the day-to-day workgroup manager. The other, known as the resource manager, works with staffers on career development.

40 Sacramento Municipal Utility District
NO. 7 FOR BENEFITS
Work/life balance programs at this California utility include access to a **subsidized, fully staffed gym on-site**; a subsidized "healthy cafeteria meal of the day"; and many wellness seminars and programs.

41 National Information Solutions Cooperative Inc.
A new "benevolence committee" at this Lake Saint Louis, Mo., data processing and billing service **helps employees and their families** in times of need. The funds come from employee contributions, which are matched by the company.

42 RAYMOND JAMES FINANCIAL INC.
Employees: 5,948
IT employees: 815

This financial services firm in St. Petersburg, Fla., extends investment and profit-sharing opportunities to its workers, too. Employees pay a discounted rate on trade transactions and can access a service that helps workers, their spouses and their children under 18 years of age with general and account-specific requests.

Profiles continue on page 38.

Raytheon People

Innovation. Driven by Diversity.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

As one of the world's foremost technology leaders, Raytheon takes on some of the most difficult challenges imaginable. Meeting those challenges requires a diversity of talent, ideas, backgrounds, opinions and beliefs. Diversity helps our teams make better decisions, build stronger customer relationships and feel more inspired, supported and empowered. It is both a catalyst and an essential advantage to everything we do.

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Raytheon

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

HOW WE CHOSE THE BEST PLACES

FOR THE 15TH YEAR in a row, *Computerworld* conducted a survey to identify the 100 best places to work for IT professionals. In March 2007, *Computerworld* started accepting nominations from U.S.-based companies. Participants were asked to provide the name and contact information of the appropriate individuals who were familiar with or had access to employment statistics and financial data.

In January 2008, the contacts at the nominated companies received a 100-question survey asking about their organizations' average salary and bonus increases, percentage of IT staffers promoted, IT staff turnover rates, training and development programs, and the percentages of women and minorities in IT staff and management positions. Information was also collected on how each organization rewards outstanding performance, as well as retention programs and benefits. Information from these surveys was used in compiling the 100 company profiles.

Upon completion of the company survey, all participating companies were required to obtain feedback from their employees and were e-mailed instructions on selecting a random sample of their U.S.-based full- and part-time IT staffs. The responses to the employee survey went directly to a third-party research vendor.

Topics covered in the survey included satisfaction with training and development programs, base salary, bonuses, health benefits and work/life balance. In addition, employees were asked to rate morale in their IT departments and the importance of various benefits.

A total of 31,317 IT employees responded to the employee survey from the final 100 companies selected. The nomination survey, company survey and employee survey were all conducted via the Internet. The company and employee survey portions of the research ended in March 2008. To qualify to complete the company survey, participating companies, both public and private, had to have 2007 revenue of $100 million or more and employ a minimum of 300 total employees and a minimum of 50 IT employees.

The top-five lists (page 41) show the best of the best – the organizations that excel in five areas of employment: diversity, career development, retention, benefits and training. To determine the lists, we considered the following:

DIVERSITY: Percentage of women and minorities in staff and managerial positions.

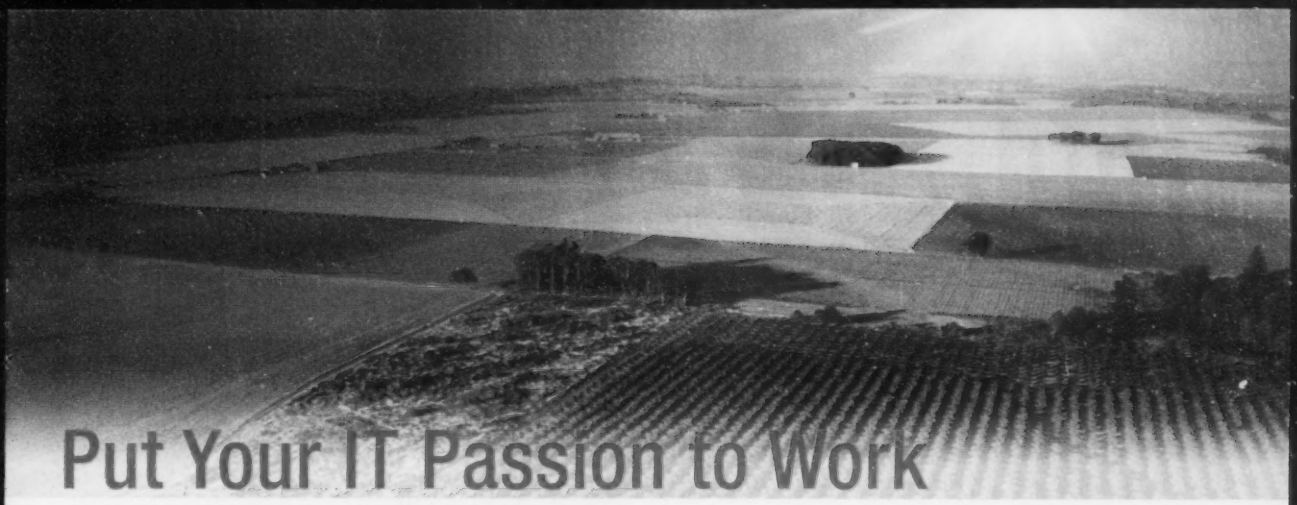
TRAINING: Average number of training days and average cost of training per IT worker per year.

CAREER DEVELOPMENT: Mentoring programs and tuition reimbursement for college classes and technical certifications.

RETENTION: Frequency of employee satisfaction surveys, turnover rate, promotions and communication initiatives.

BENEFITS: A range of benefits, including sabbaticals and health and vision benefits.

In scoring the responses from the surveys, company results were weighted based on employees' benefit-importance ratings in the employee portion. Approximately one-half of the total scoring system is based on employee responses, with the remaining half based on the survey of company benefits and other programs. ■



Put Your IT Passion to Work

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At Monsanto, we believe in –

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AGRICULTURE

Making agriculture stronger helps people feel that they are making a difference by feeding the world while preserving the environment.

EXCELLENCE

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Visit **www.monsanto.com** and **www.monsanto.com/careers.com** to learn more about Monsanto, our passion and our opportunities.

COMPUTERWORLD'S TOP 12 GREEN-IT COMPANIES

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2007

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

2007 ASUG Impact Award

InformationWeek 500

MONSANTO imagine®

Monsanto values diversity and is an equal opportunity affirmative action employer. M/F/D/V

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

Employee Scorecard

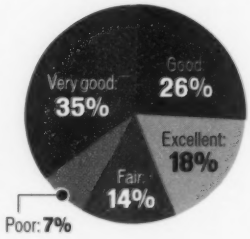
WHAT'S MOST IMPORTANT ABOUT YOUR JOB?

PERCENTAGE OF RESPONDENTS:

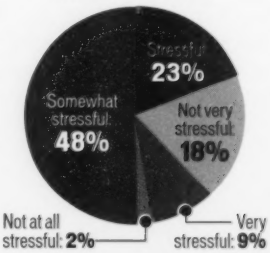
Being fairly compensated for the work I do	94%
Working in a challenging and enjoyable environment	93%
Having access to training and opportunities that further my skills	91%
Having the means and opportunity to further my career	88%
Being able to work with cutting-edge technologies	74%
Working with a group of people who are culturally and ethnically diverse, with a range of opinions and perspectives	66%

MULTIPLE RESPONSES ALLOWED.

HOW DO YOU RATE YOUR IT DEPARTMENT'S MORALE?



HOW DO YOU RATE YOUR WORKPLACE STRESS LEVEL?



HOW DO YOU RATE JOB SATISFACTION FACTORS?

PERCENTAGE OF EMPLOYEES WHO ARE VERY SATISFIED OR SATISFIED WITH:

Training and development programs	74%
Health benefits	77%
Base salaries	74%
Work/life balance	74%
Bonuses	60%

WHAT'S THE BEST BENEFIT?

Paid vacation	78%
Health insurance	71%
Profit sharing/employee stock ownership program/ 401(k)/403(b) plan	51%
Flexible hours	45%
Telecommuting	44%

MULTIPLE RESPONSES ALLOWED.

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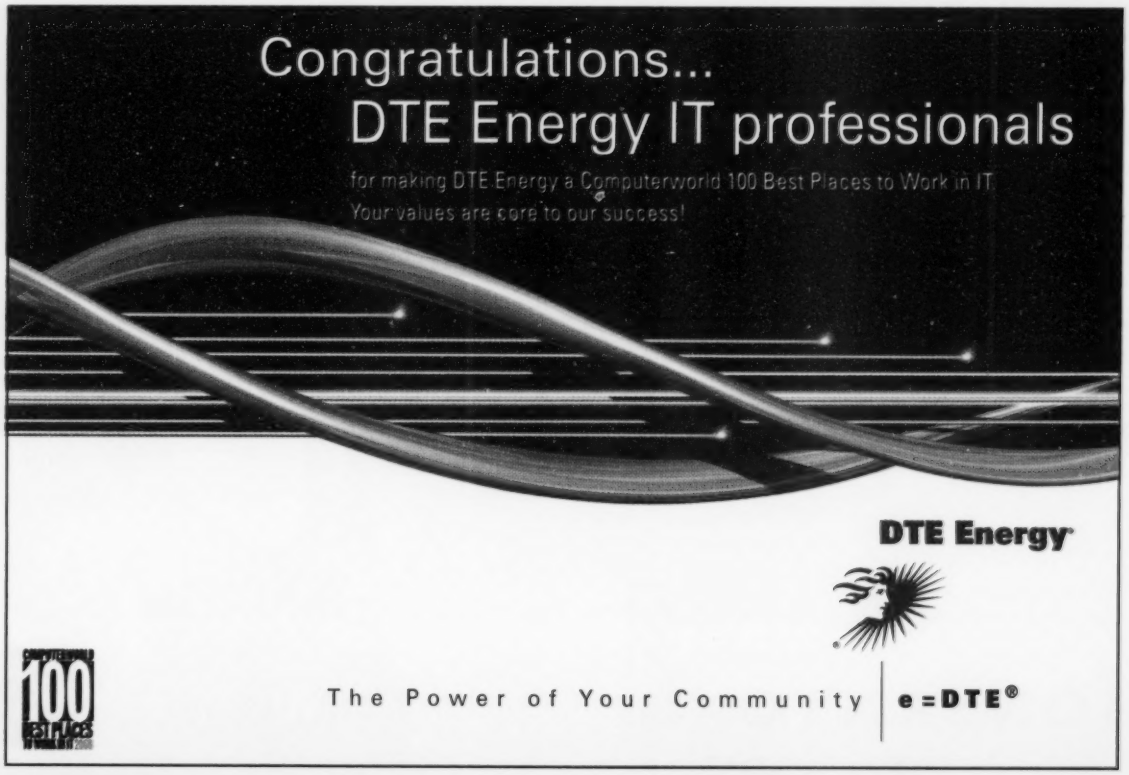
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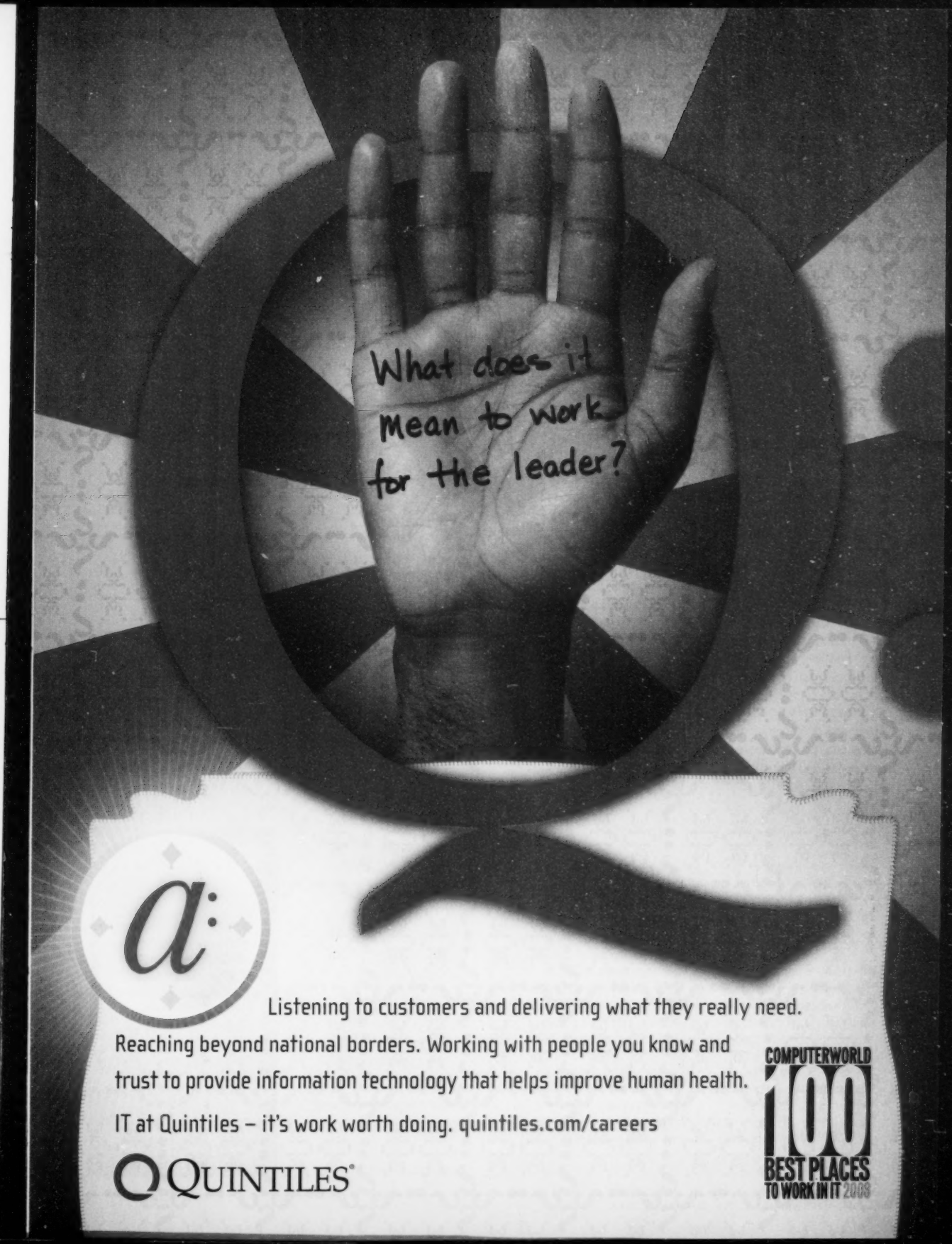
What does it
mean to work
for the leader?
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Reaching beyond national borders. Working with people you know and
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BEST PLACES
TO WORK IN IT 2003

SEI

Encouraging **RISK**, accepting **FAILURES**

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"For me, it's been a great change," he says.

– ROBERT L. MITCHELL

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COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

Employee Scorecard

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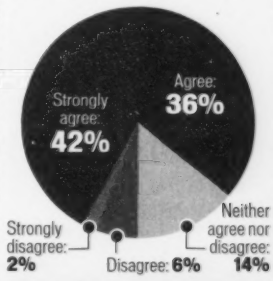

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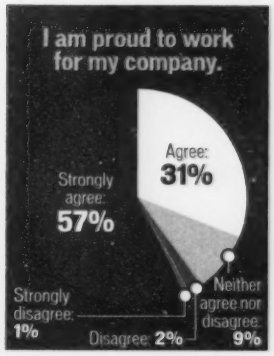
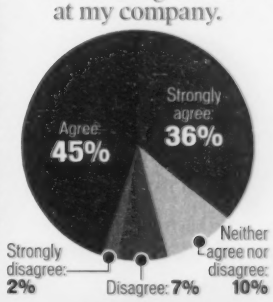


There are opportunities for career growth at my company.



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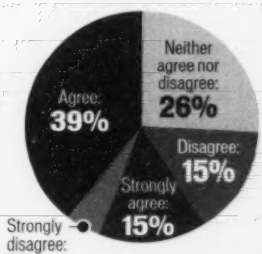

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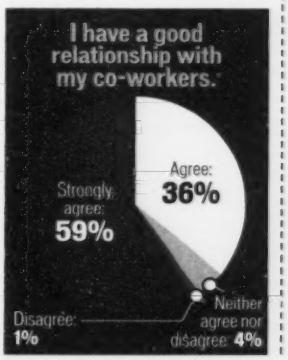

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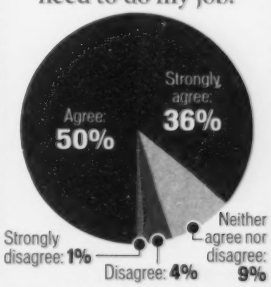

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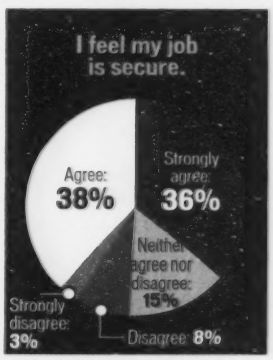

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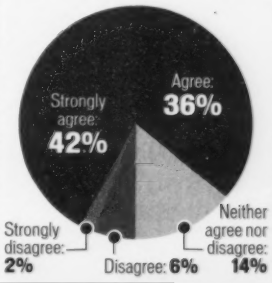

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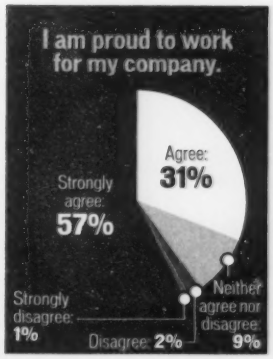

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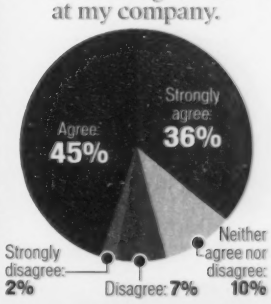

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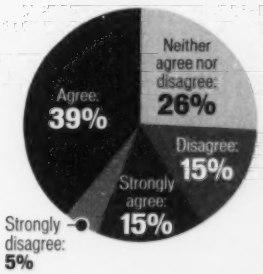

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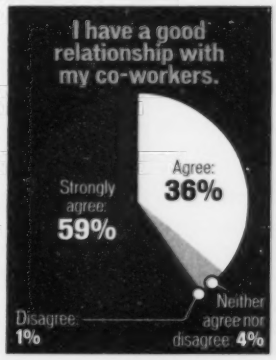

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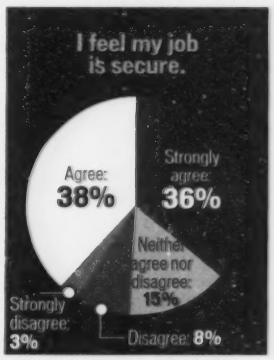

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In front, Becky Babyak and Jay Goodkin; in back, Jim Pennington, Bob Pearson and Marty Withrow

51 OCLC

Employees stay put, thanks to a **CULTURE OF RESPECT**

It can be hard to pin down a single reason why a particular company is a great place to work. At The Online Computer Library Center (OCLC), it boils down to a company culture that combines respect for employees and a strong familial atmosphere.

The average tenure among OCLC's 1,300 worldwide staffers is 14 years, and the turnover rate is relatively low, at just 10%, says Karen Worthington, human resources manager at the Dublin, Ohio-based provider of connectivity services for public and academic libraries.

For some of the company's 550 IT staffers, one of the key differentiators is a culture that fosters a spirit of teamwork in an environment where people's opinions matter.

"When you're at work on a project, pretty much everyone has an equal [say in a] decision, no matter what your role is," says Bob Pearson, a development manager who's been with the company for 21 years.

For developer Jim Pennington, it all comes down to working with great people. "If I didn't like the people I worked with, I wouldn't have been here 30 years," he says.

– THOMAS HOFFMAN

52 CME GROUP INC.

NO. 5 IN CAREER DEVELOPMENT

This company, which owns the Chicago Mercantile Exchange and the Chicago Board of Trade, strives to be on the cutting edge. The CME Group Center for Innovation showcases and fosters creative thinking across multiple industries. CME Group also sponsors a program in which it awards cash bonuses and other recognition to employees who are issued U.S. patents.

53 Temple University

NO. 8 IN DIVERSITY

This top-rated university in Philadelphia is working to expand its research base, and that's driving technology expansion. With more than 34,000 students enrolled, it has the **largest university computer learning center in the nation**, with a price tag of more than $15 million.

54 Paychex Inc.

The **wellness program** at this Rochester, N.Y.-based payroll accounting firm (the second-largest in the U.S.) aims to cover every aspect of employee health. During a recent "Eat Well, Live Well" challenge, the IT group held healthy luncheons and organized walking groups to do lunchtime laps around the parking lot.

55 NORTON HEALTHCARE

IT promotions in 2007: 7%

First-time home buyers, take note: This Louisville, Ky.-based health care provider offers financial assistance to its employees who are looking to buy their first homes. The program provides approved employees with a one-time, $5,000, four-year forgivable loan. The loan is forgiven at the end of each year at the rate of 25% (or $1,250 per year), as long as the employee stays with the company.

56 Apollo Group Inc.

NO. 6 IN CAREER DEVELOPMENT

In addition to its regular training budget, this Phoenix-based parent company of the University of Phoenix and Axia College offers all active full-time regular employees a **100% tuition waiver** at any of Apollo Group's schools, starting on their date of hire.

57 CARMAX INC.

Women in IT: 22%
Minorities in IT: 23%

This specialty used-car retailer in Richmond, Va., believes in giving back to the community. Through its CarMax Foundation, it administers national, regional and local grants, matching gifts and volunteer programs. The foundation has provided grants to help Mothers Against Drunk Driving expand its student-driven college program to campuses nationwide.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

Employer Scorecard

WHICH OFFERS THE BEST Benefits?

1	H. Lee Moffitt Cancer Center & Research Institute
2	SAS Institute Inc.
3	Genentech Inc.
4	Financial Industry Regulatory Authority Inc.
5	Pfizer Inc.

TOP 5 BENEFITS

PERCENTAGE OF COMPANIES THAT OFFER:

Flexible hours	100%
Employee assistance programs	100%
Health insurance	100%
Paid vacation	100%
College tuition reimbursement	98%

WHICH IS THE BEST AT Retention?

1	National Rural Electric Cooperative Association
2	Commonwealth Financial Network
3	Englewood Hospital and Medical Center
4	H. Lee Moffitt Cancer Center & Research Institute
5	University of Miami

TOP 5 RETENTION METHODS

PERCENTAGE OF COMPANIES THAT OFFER:

Competitive benefits	100%
Competitive salaries	99%
Tuition reimbursement	99%
Work/life balance	98%
Flexible work hours	98%

WHICH ARE THE BEST AT Diversity?

1	Mount Carmel Health System
2	New York-Presbyterian Hospital
3	The Capital Group Cos.
4	Quicken Loans Inc.
5	University of Pennsylvania

AT A TYPICAL BEST PLACE

THE WORKFORCE IS DIVERSE:

Women IT staffers	33%
Women IT managers	32%
Minority IT staffers	27%
Minority IT managers	17%

WHICH ARE THE BEST FOR Career Development

1	Cerner Corp.
2	Rackspace US Inc.
3	USAA
4	T-Mobile USA Inc.
5	CME Group Inc.

AT A TYPICAL BEST PLACE

MANAGERS VALUE STAFFERS:

Offer IT staffers formal mentoring programs	67%
Survey IT staffers about job satisfaction once a year	49%
Survey IT staffers about job satisfaction more than once a year	15%

WHICH OFFER THE MOST Training?

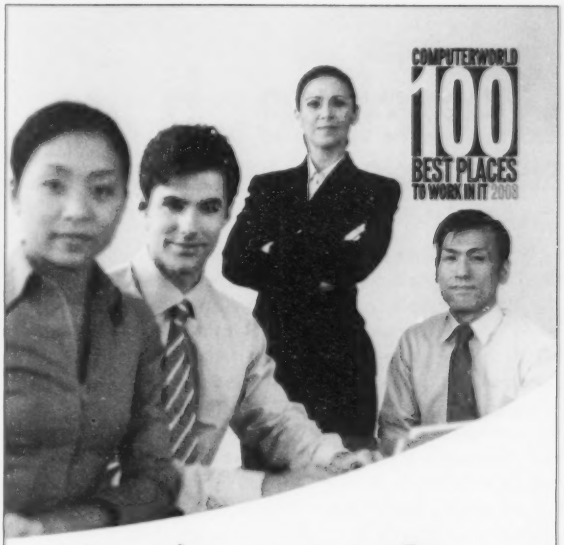
1	Monsanto Co.
2	National Rural Electric Cooperative Association
3	Commonwealth Financial Network
4	The Mitre Corp.
5	Securian Financial Group Inc.

A TYPICAL BEST PLACE . . .

Spends **$2,118 per IT employee** on training

Offers **6 training days annually** for IT staffers

SOURCE: SURVEYS FROM THE 100 BEST PLACES TO WORK IN IT 2008



You've made all the right moves.

Did you know Exelon is...

- a Fortune 150 company with state-of-the-art products, technology and services.
- the largest nuclear operator in North America with $15 billion in annual revenue and a workforce of approximately 18,000 employees.
- a diverse corporation in the business of power marketing, energy delivery and nuclear operations.
- named in *Business Week* magazine as one of the "Best Places to launch a Career."
- included, for the third year in a row, in the *InformationWeek* 500, a ranking of the United States' most innovative IT organizations.
- known for it's comprehensive training and benefits including a flexible work program.
- always looking for top talent.

Make the next move and visit **www.exeloncorp.com/careers.**

Exelon.

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58 Genentech

RISK-TAKING and INNOVATION are valued and encouraged

When you're developing a cure for cancer, a sense of urgency is important. But combine that intense sense of mission with an informal, nonhierarchical workplace that offers plenty of perks, and you've got Genentech Inc.

"Cancer is the competition; that's who we're trying to beat," says Todd Pierce, vice president of corporate IT. It's just that the serious mission is being pursued at a place that also offers doggie day care, a shuttle bus throughout the San Francisco Bay Area and freshly made sushi at lunch.

The culture in IT at the 30-year-old biotech firm is very open to risk-taking, innovation and trying new approaches, Pierce says, especially when it comes to providing scientists and other employees with tools for mobility and collaboration.

For instance, Genentech will be one of the first pharmaceutical companies to roll out Salesforce.com to its commercial business, and it plans to deploy 3,000 Apple iPhones to its employees. In the first week the iPhone was available, Pierce says, IT had seven applications for it already developed. It's also in the process of moving to Google's calendar and e-mail applications.

Ideas don't get hindered by hierarchy: Pierce has established a requirement that IT be made up of only 10% management. "We don't want an overmanaged workforce," he says. "In many organizations, the energy gets lost to bureaucracy."

Systems administrator Ben Zuffi agrees that the culture encourages innovation.

"You're not burdened with hoops to jump through," he says.

– MARY BRANDEL

DTE Energy Co.

NO. 10 IN DIVERSITY

59 In addition to focusing on developing its diverse workforce, this Detroit-based energy company, which serves customers in southeastern Michigan, lets its employees know when they've done a job well.

Managers gauge how best to recognize each employee – either privately or in a public forum. One opportunity is the Alex Dow Award, which recognizes outstanding achievement consistent with the company's responsibilities as an investor-owned utility and exemplifies its core values and operating principles. Also, the Sarah Sheridan Award honors employees who provide outstanding customer service.

60 T-Mobile USA Inc.

NO. 4 IN CAREER DEVELOPMENT
NO. 9 IN BENEFITS

Every employee at this Bellevue, Wash.-based telecommunications company is eligible for incentive pay. The **quarterly pay-for-performance bonus** starts at 10% of annual base pay and increases based on level, responsibility and tenure.

61 CONSTELLATION ENERGY GROUP INC.

IT turnover in 2007: 6%
IT promotions in 2007: 14%

Learning resources are plentiful at this Baltimore energy company through its myDevelopment Learning Center. MyDev encourages the pursuit of personal and professional growth through an online resource center featuring technical and business courses and leadership tools. IT professionals can participate in nearly 60 traditional classroom training opportunities.

Penn National Insurance

62 The IT department at this insurance firm in Harrisburg, Pa., offers informal "Tech Talks" throughout the year. Given by IT volunteers, the talks can be overviews of the technology being used on current projects, demonstrations of newly developed systems, or explanation of how technology is being used by end users. Tech Talks are open to everyone in the IT division and end-user communities, and participation has been so high that additional sessions have been scheduled. Another key benefit: In 2002, under a new compensation plan, more than 60% of IT employees became eligible for an incentive plan tied to reaching certain performance goals. Most employees work toward two objectives, one project-related and the other focused on personal development. Approximately 20% of the total staff is eligible for an average payout of $10,000.

63 TEXAS INSTRUMENTS INC.

Women in IT: 30%
Minorities in IT: 26%

This Dallas-based semiconductor maker has a work/life balance package that runs the gamut from flexible work schedules to on-site fitness opportunities. The company also offers dependent care, adoption assistance, paid paternity and adoption leave, and a concierge service. Work options include flextime and telecommuting.

64 Anheuser-Busch Cos.

NO. 10 IN BENEFITS

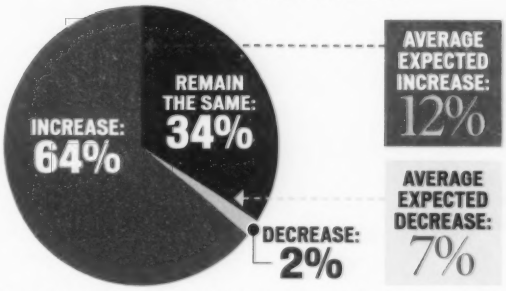
Its most popular brands, Budweiser and Bud Light, have put this St. Louis brewer at the top of its market. Workers help keep it there by **treating friends and family to Anheuser-Busch products**, using prepaid debit cards that are reloaded throughout the year.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

By the Numbers

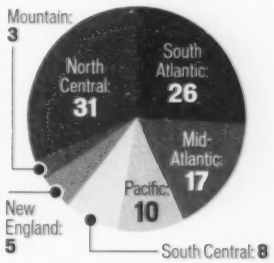
HIRING FORECAST

PERCENTAGE OF ORGANIZATIONS THAT IN 2008 EXPECT THE NUMBER OF U.S.-BASED IT STAFFERS TO:



WHERE THEY ARE

NUMBER OF ORGANIZATIONS IN EACH REGION



THE TYPICAL BEST PLACE

Revenue	$11B
Years in business	78
Total number of employees	31,778
Total number of IT employees	1,033
IT budget	$323.4M
Average workweek	42 hours

ACQUISITIONS

29% have merged with or acquired companies or divested business units since Jan. 1, 2007

15% of companies have an acquisition, merger or divestiture now pending

TRAINING

68% said their training budgets per IT employee will increase in 2008 compared with 2007

COMPENSATION

93% have budgeted for salary increases for IT employees in 2008

78% have budgeted for bonuses for IT employees in 2008

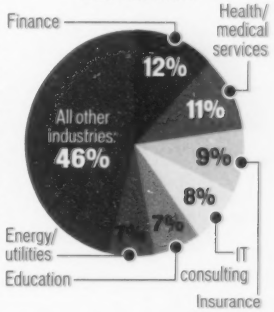
STAFFING

7% Average IT staff turnover rate in the latest fiscal year

11% Average of IT staff promoted in the latest fiscal year

WHAT THEY DO

PERCENTAGE OF ORGANIZATIONS IN EACH INDUSTRY



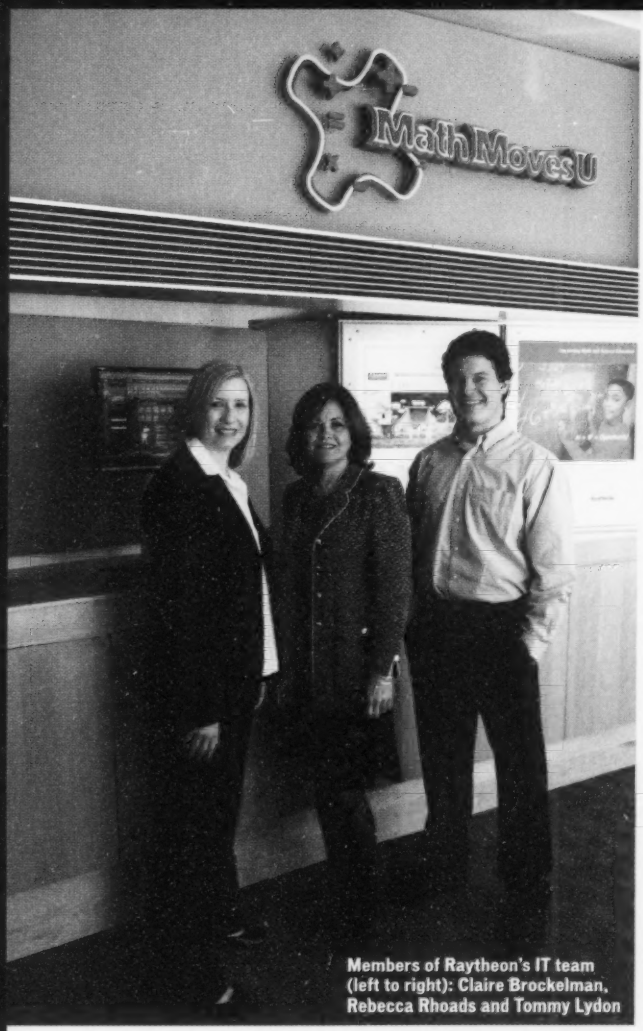
SOURCE FOR ALL CHARTS: SURVEYS FROM THE 100 BEST PLACES TO WORK IN IT 2008

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

Thanks to our Information Services employees, Norton Healthcare has been recognized among the ***Computerworld Best Places to Work in IT*** for the second consecutive year.

NORTON HEALTHCARE

NortonHealthcare.com/careers



Members of Raytheon's IT team (left to right): Claire Brockelman, Rebecca Rhoads and Tommy Lydon

Raytheon Co.

TOP TALENT is recognized and rewarded

65 When project manager Claire Brockelman talks about what it's like to work in IT at Raytheon Co., one phrase keeps coming up: "Really cool." As in really cool recognition and compensation programs. And really cool job flexibility. There's also a lot of respect for IT. She says one business unit president described IT as "the underlying support system for everything Raytheon does."

Data center manager Tommy Lydon finds that level of appreciation rewarding. "The business is giving IT an opportunity to have a seat at the table. You feel like a valued contributor here," he says.

Waltham, Mass.-based Raytheon offers several programs to retain top talent. For example, the company paid the entire tab for Brockelman's master's degree, and her team's enterprise search project was selected for the annual CIO Excellence Award. "It felt good to be recognized at that level," Brockelman says.

Employees can also get involved in community outreach programs like MathMovesU, in which they tutor high school students and support national math competitions.

Career-planning benefits include "competency models" for evaluating IT roles. Employees use the models to compare their skills with those needed for a given role so they can then identify any gaps and set up a plan for acquiring the skills they lack.

Says Brockelman, "The message I get from Raytheon is, 'You need to decide where you want to go. We'll give you the tools to get there.'"

– ROBERT L. MITCHELL

66 CDW Corp.

This computer products reseller in Vernon Hills, Ill., believes in **giving back and helping its workers do the same.** Eligible employees can take one paid day off per year to perform community service. The company also matches up to $1,000 of each worker's charitable contributions per quarter.

67 STATE FARM INSURANCE COS.

IT turnover in 2007: 4%
IT promotions in 2007: 9%

This mutual insurance company in Bloomington, Ill., conducts its technology research on-site, at a 6,000-square-foot suite on the campus of the University of Illinois. IT staffers also get their hands on new technology through early-adopter programs with vendors. Job opportunities for IT workers are varied – there are more than 100 technology skill sets within the IT shop, and 15 primary roles.

68 CA Inc.

Working at this giant software firm has its benefits for tech-hungry staffers. The IT group is considered a premier CA "customer," which means **IT workers implement CA's software in-house before it ships to external customers.** IT employees also regularly partner with colleagues from the business side.

69 AMTRUST BANK

NO. 8 IN CAREER DEVELOPMENT
Training days for IT: 7

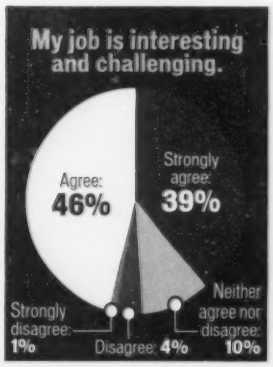
Employees can choose the schedule that works for them (and their managers) at this Cleveland-based savings bank, which has more than 50 branches and loan offices. The company offers flexible workdays and workweeks and the option to work from home. Health and wellness services include a fitness center, an on-site wellness clinic staffed by a nurse and a dietician, and an on-site lactation room for nursing mothers.

COMPUTERWORLD 100 BEST PLACES TO WORK IN IT 2008

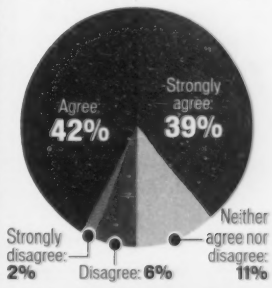
Employee Scorecard

I am motivated to do my best.

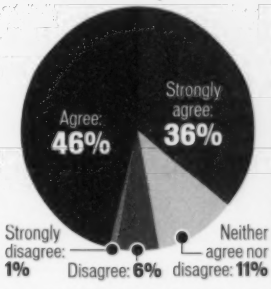
My job is interesting and challenging.



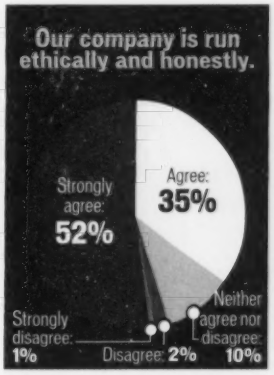
This is a team-oriented company/department.



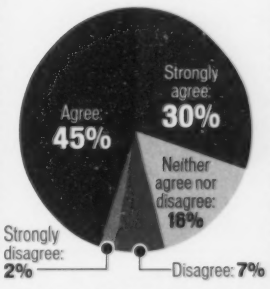
I have access to training and education to enhance my skills.



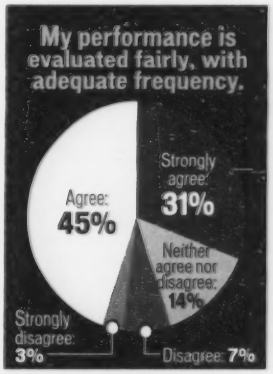
Our company is run ethically and honestly.



I have access to new technologies.



My performance is evaluated fairly, with adequate frequency.



SOURCE: 31,317 IT WORKER RESPONSES TO THE EMPLOYEE PORTION OF THE BEST PLACES SURVEY, FROM THE FINAL 100 ORGANIZATIONS SELECTED

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70 Exelon Corp.

Creating DIVERSITY in staffing

There are many reasons why Exelon Corp.'s IT organization is a great place to work, but its pledge to maintain a culturally and ethnically diverse IT staff is how the company truly stands out. "It's not just lip service," notes Tim Webster, a lead analyst at the energy services provider.

It helps that Exelon has operations in ethnically diverse urban markets such as Chicago and Philadelphia. But that in itself doesn't guarantee an IT staff with varied backgrounds.

To help make that happen, Exelon's IT and HR leaders ensure that "we're always making decisions around recruitment, training and development with the diversity goal in mind," says Silvana Tosic, Exelon's manager of IT employee support.

The proof is in the pudding. Exelon reports that 26% of its IT managers are women, and 28% of its IT staffers are minorities.

Exelon's job rotation program also contributes to the company's diversity. "There's an ability for [IT staffers] to move from one area to another, which brings a breadth of knowledge and experience" to various IT functional areas, says Cynthia Kubala, a lead analyst.

What else makes Exelon a great place to work? A commitment from IT executives such as CIO Dan Hill to ensure that the department is top-tier from an operational and efficiency standpoint, says Jay Cavalcanto, operational security manager at the Chicago-based energy giant.

In addition, Hill and other IT executives make sure that Exelon's roughly 700 IT staffers are rotated regularly through various parts of the IT organization.

– THOMAS HOFFMAN

71 Comerica Inc.

This Auburn Hills, Mich.-based bank holding firm, which has about 460 branches, puts a **keen focus on diversity.** Its Master of Diversity Awareness Program helps workers become aware of personal differences and recognize the benefits of diversity to the organization.

72 CATERPILLAR INC.

IT turnover in 2007: 1%

IT employees at this earth-moving and agricultural equipment supplier in Peoria, Ill., can use their tech savvy in two ways: They are given opportunities to dive into their technical specialties across the company, or they can use their skills more broadly in business functions such as manufacturing or marketing to develop and deliver business systems.

73 DISCOVER FINANCIAL SERVICES LLC

Last June, Discover Financial in Riverwoods, Ill., spun off from Morgan Stanley to become an independent company. As part of the spin-off, each benefits-eligible employee could receive a Founder's Grant award of Discover restricted stock units, meaning each employee could become a company shareholder. In October, the first dividends were paid out.

74 United Parcel Service of America Inc.

This Atlanta-based package delivery company **seeks out its best workers and helps nurture their IT careers.** Through its Technology Opportunity Program, high-performing employees from all operations areas are trained to move into IT posts.

75 Northern Trust Corp.

This asset management firm in Chicago offers extensive employee benefits. But **a strong sense of job security** might be the most valued benefit: Northern is in growth mode, with expanding lines of products and services, plus new opportunities for the IT workforce.

76 MARITZ INC.

Employees: 5,279
IT employees: 665

This Fenton, Mo.-based company is in the business of making employees happy: Maritz designs employee incentive and reward programs and customer-loyalty programs for other companies. In January, it introduced a wellness program for its own employees that's focused on education, consumer awareness, fitness, and prevention and detection of health problems.

77 The George Washington University

When it was founded in 1821 as Columbian College, this Washington-based school had 30 students. Now it boasts more than 19,000 students enrolled in nine schools. A big perk: **Employees and their families can earn degrees at little or no cost.**

78 AETNA INC.

IT turnover in 2007: 5%
IT promotions in 2007: 10%

A team bonus program at this health insurance company in Hartford, Conn., ties IT project results to employee bonuses. Workers who participate in the program can increase their bonuses based on their individual performances and their ability to collaborate with team members. Program participants can monitor ongoing project results online.

Members of the Publix IT team, standing, left to right: Sunil Singh, Mike Booher and Steve Reed; seated: Jennifer Schmucker and Maria Espinosa

Publix Super Markets Inc.

LONG TENURES make for a tight team

79 Can you name the exact date you started your job with your current employer? Mike Booher can: Aug. 23, 1993. And he says he's not the only one who closely tracks his anniversary with Publix Super Markets Inc., a supermarket chain based in Lakeland, Fla. Maybe it's the celebrations held for every five years of employment, the 10 opportunities per year to win a superior-performance award, or the holiday bonus equaling a month's pay. Or maybe it's the fact that employees are also part owners, thanks to the company's stock ownership program, in which employees become fully vested after five years.

"If an associate stays past the three-to-five-year mark, our retention rates soar," says Booher, director of IT finance. "That's when they really start to see the benefit of associate ownership."

Take 16-year veteran Steve Reed, who started at Publix washing trucks and is now a senior systems engineer. "The longer you stay, the more you love it, partly because you're a stock owner and also because of the ownership you take in what you do," he says. The long tenures within the IT team create a camaraderie and culture that's "second to none," says Reed.

– MARY BRANDEL

80 Southern California Edison Co.

The IT department at this Rosemead, Calif., utility company, one of the largest in the state, was **the first business unit to develop a comprehensive safety program** that laid the foundation for an expanded program companywide.

81 ANTARES MANAGEMENT SOLUTIONS

Employees: 553
IT employees: 421

A division of Medical Mutual Services LLC, this Westlake, Ohio-based company sells application hosting services to the life and health insurance industries. Employees can earn discounts on insurance premiums by participating in educational programs on healthy living. They are also offered health and wellness benefits such as on-site fitness centers.

82 CORNELL UNIVERSITY

IT turnover in 2007: 4%
IT promotions in 2007: 10%

This Ivy League university in Ithaca, N.Y., contributes 10% of salaried employees' annual pay into retirement accounts starting on their first day of employment. And $2,500 is budgeted annually for each employee's continued development in his current position. In addition, employees have access to Cornell University's courses for free.

83 National Rural Electric Cooperative Association

NO. 1 IN RETENTION

This Arlington, Va., organization, which represents consumer-owned power cooperatives, has formalized its telework policy, and **many IT staffers telecommute more than one day per week**, using technology to keep in touch.

84 New York-Presbyterian Hospital

This hospital is offering a new program for its employees: free access to a concierge service called Errand Solutions. An award-winning program, Errand Solutions **helps employees take care of tasks on their to-do lists** so they can have more free time outside of work.

85 THE BOEING CO.

Employees: 159,313
IT employees: 8,431

Through Boeing's Learning Together program, employees can participate in educational programs and courses to enhance their job performance, intellectual growth, professional development and pursuit of creative interests. Chicago-based Boeing invests more than $100 million in the program, which is available to all employees, including those of wholly owned subsidiaries.

Intermountain Health Care Inc.

86 This Salt Lake City-based not-for-profit health system operates 20 hospitals, as well as home health-care agencies, an air ambulance service, physician and urgent-care clinics, counseling offices, rehabilitation centers and other health care facilities. The organization offers its software developers and other IT professionals the opportunity to work side by side with doctors, nurses and clinicians to design, develop and build clinical software applications. Doctors and nurses are closely involved with all aspects of the software development process, including product planning, user-interface design and clinical workflows.

MGM Mirage

Opportunities abound for ADVANCEMENT and travel

87 You don't have to be lucky to advance within the IT department at casino and resort operator MGM Mirage in Las Vegas. You do, however, have to have a passion for IT – and the business. Even entry-level PC technicians are given opportunities to work as analysts or systems engineers and in other roles. "A lot of people come up through the ranks here," says Scott Wessel.

He should know. As director of property development, Wessel is responsible for IT initiatives related to new construction, but the 15-year veteran moved from the business side to IT along the way. Wessel's undergraduate degree was in hotel management, but MGM supported his interest in pursuing a master's degree in IT. That led to a job in application support, as well as a stint in a new operation in Macau, China, as acting director of IT.

IT staffers can also work with a wide variety of technologies, including state-of-the-art systems like the IP-based devices going into every room in MGM's $8.4 billion CityCenter resort, now under construction in Las Vegas. "The business leaders totally get it," says CIO Tom Peck. "They understand the importance of technology, and they embrace it."

But in a global economy, one of the best perks may be the opportunities for travel. Last December, MGM sent 12 people to Macau to work on an IT project. "How many people get that opportunity to spend a month in China?" asks Wessels.

As MGM continues to expand internationally, Peck expects the number of projects overseas to increase. "There's a ton of opportunity," he says.

– ROBERT L. MITCHELL

88 H. Lee Moffitt Cancer Center & Research Institute

NO. 1 IN BENEFITS

One of the National Cancer Institute's elite cancer centers, Moffitt offers employees **a comprehensive health and wellness program.** The Tampa, Fla., organization reimburses program participants up to 5% of the cost of their medical benefits.

89 ENGLEWOOD HOSPITAL AND MEDICAL CENTER

NO. 3 IN RETENTION
NO. 7 IN TRAINING
IT turnover in 2007: 10%
Training days per IT employee in 2007: 10

Founded in 1890, this 550-bed acute-care hospital in Englewood, N.J., offers flexible work schedules for its employees, and that helps them achieve work/life balance. Also, managers consistently promote people from within their departments.

90 TELLABS INC.

Employees: 2,523
IT employees: 201

The focus is on employee rewards at this telecommunications equipment provider in Naperville, Ill. Outstanding performance is recognized on team and individual levels and is rewarded through the President's Award, merit increases, a bonus program and stock-incentive plans. Team celebrations include outings such as wine tastings and cruises.

91 Quest Diagnostics Inc.

This Madison, N.J.-based clinical lab, which provides diagnostic services to physicians and patients, encourages its employees to **improve their own health** through its HealthyQuest health risk-assessment service. Participants get a discount on medical benefits.

92 Cerner Corp.

NO. 1 IN CAREER DEVELOPMENT

This Kansas City, Mo.-based clinical and administrative systems provider looks out for the health of its workers. Perks include a gym with an indoor pool, a Montessori facility and an **on-site primary care clinic** for employees and their dependents.

93 ALLSTATE INSURANCE CO.

Women in IT: 44%
Minorities in IT: 30%

Strong performers are rewarded in a big way at this Fortune 100 insurance company in Northbrook, Ill. As a sponsor of several high-profile sporting events, such as NASCAR races, Allstate rewards employees with free tickets and VIP treatment. Employees also have access to free or discounted tickets to concerts and other events at Allstate Arena.

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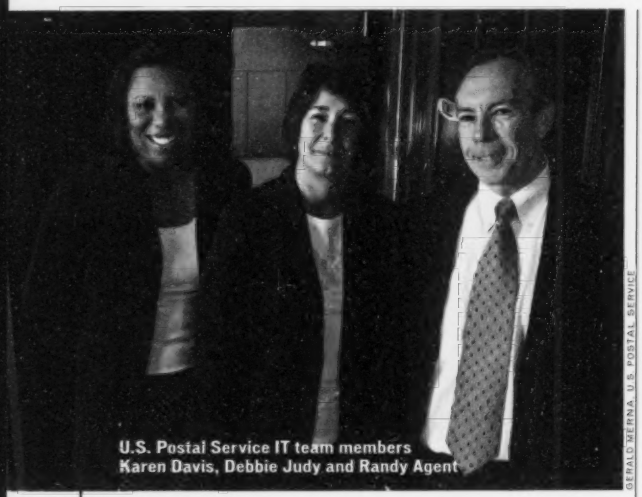

U.S. Postal Service IT team members Karen Davis, Debbie Judy and Randy Agent

GERALD WIENNA, U.S. POSTAL SERVICE

U.S. Postal Service

Big projects mean big OPPORTUNITIES

94 Just about everything at the U.S. Postal Service is big. It is the second-largest employer in the world after the U.S. Department of Defense. It delivers more than 212 billion pieces of mail each year. And its 1,374 full-time IT employees get to work on some massive, and challenging, IT projects, says Debbie Judy, manager of IT value for the federal agency.

For example, Judy points to a single-instance SAP ERP deployment for the postal service's 7,000-plus human resources managers and staffers. The agency completed the project in September 2007.

Plus, unlike IT workers at most organizations, U.S. Postal Service IT employees often get to experience the results of their projects as consumers, adds Karen Davis, a program manager for point-of-sale systems. "I don't think most companies are in that unique position like we are," she says.

Even though the service is headquartered in Washington, it has seven IT sites around the U.S. Those regional locations have opened up opportunities for IT staffers such as Randy Agent.

When he started with the postal service 24 years ago, Agent was a mail handler unloading trucks in Evansville, Ind. In 1997, he applied for a position as an IT resource analyst in Washington. He got the job and was promoted to IT program manager in 2000.

Agent took advantage of the postal service's tuition reimbursement program, earned his bachelor's degree in computer science and now serves as a liaison between the IT department and various business units.

– THOMAS HOFFMAN

95 COMMONWEALTH FINANCIAL NETWORK

NO. 2 IN RETENTION
NO. 3 IN TRAINING

Pick your vacation spot and pack your bags. After three years of service, employees at this Waltham, Mass.-based financial services company are eligible to stay free of charge at vacation homes owned by the CEO. There are five properties from which to choose, including two condos at the Ritz-Carlton in Key Biscayne, Fla.

96 Financial Industry Regulatory Authority Inc.

NO. 4 IN BENEFITS

Money talks at this Rockville, Md.-based agency, the largest of the nongovernmental regulators for U.S. securities firms. It offers **competitive compensation** and a company-funded pension program.

97 State Street Corp.

One hallmark of this Boston-based financial services firm's IT unit is its Excellence in Action program. Led by a team of volunteers, it includes **communication, employee-development, and rewards and recognition programs.** Recipients of the CIO Award receive money and a memento.

98 DUKE UNIVERSITY HEALTH SYSTEM & DUKE UNIVERSITY MEDICAL CENTER

Employees: 22,000
IT employees: 542

This Durham, N.C.-based health care system requires round-the-clock IT support, and its IT workers are given the technology they need to make that support happen. IT employees are set up with services and devices such as DSL connections, BlackBerries, PDAs and cell phones.

99 Automotive Resources International

NO. 9 IN RETENTION

IT workers at this car leasing and fleet management service, in Mount Laurel, N.J., are inspired to think up great ideas. Suggestions that result in savings or revenue greater than $5,000 **earn the employee 10% of the annualized savings or revenue**, up to $5,000.

100 PFIZER INC.

NO. 5 IN BENEFITS
Employees: 90,000
IT employees: 1,549

Pfizer is the world's largest research-based pharmaceuticals firm, manufacturing brands such as Viagra and Lipitor, as well as over-the-counter remedies like Benadryl and Sudafed. The New York-based company's worldwide technology division is organized as "OneIT," with all divisions reporting to the CIO, thus encouraging innovation on a global scale.

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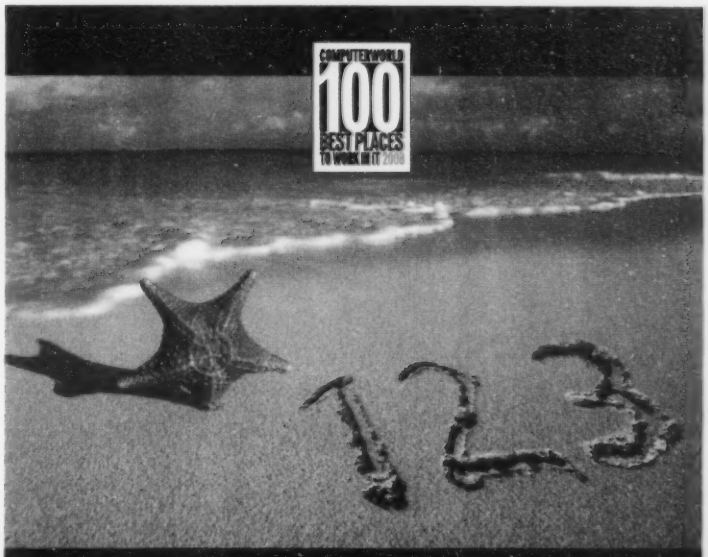

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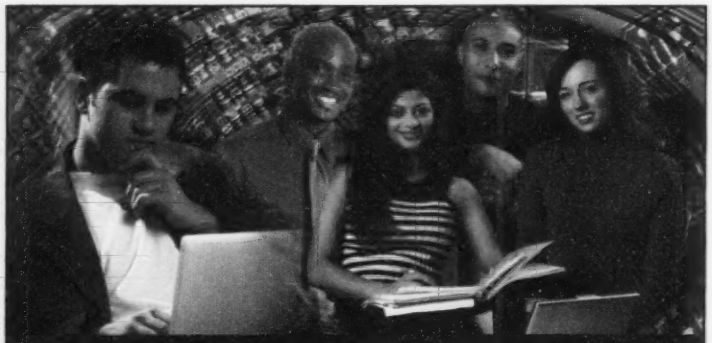

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SW ENGGS: Lead to design, develop in Java, J2EE, Design Patterns, Perl, PHP, SQL, DB2, Oracle, Sybase; define reqts; prepare tech/func design docs; supervise QA; train users; guide team. Req: Masters or foreign equiv (5/6 yr prog of study) in CS / Engg / Buss / Related & 1 yr exp. SYS ANALYST: Perform sys analysis, design in OOAD, Java, J2EE, Weblogic, Websphere, Oracle, SQL, Struts, HTML, XML; quality mngmnt process; provide prod support; resolve sys issues; design, develop UI. Req: BS or foreign equiv in CS/Engg & 2 yrs exp. FT Comp Salary Travel. Resume: HR, Bahwan Cybertek, Inc., 209 W Central St, Ste 312, Natick, MA 01760

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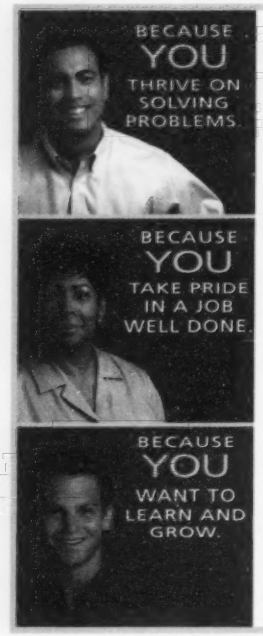

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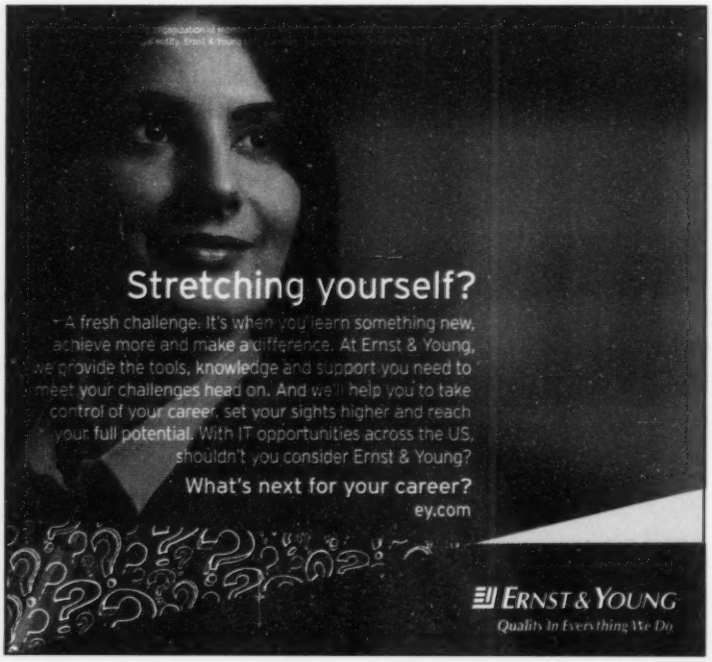
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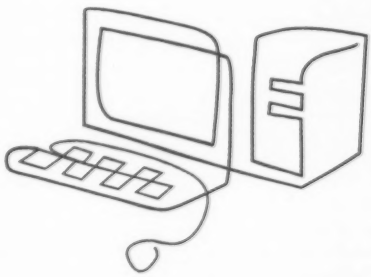

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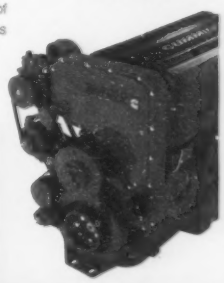

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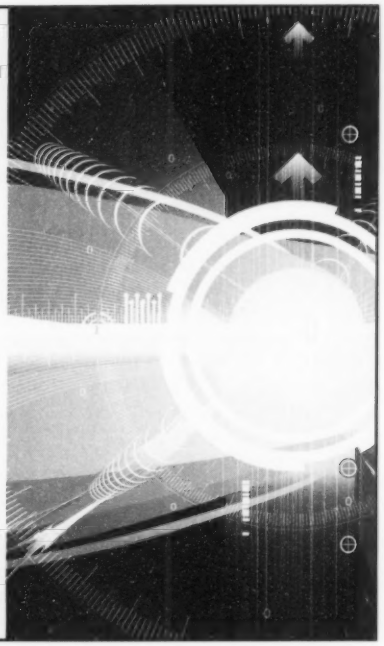

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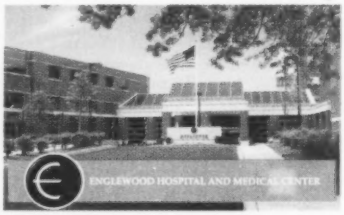

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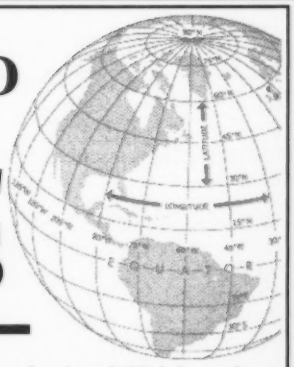

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COMPUTERWORLD IT CAREERS

Shark Tank

TRUE TALES OF IT LIFE AS TOLD TO SHARKY

Short Answer: No

Pilot fish in charge of IT support gets a call from the assistant to a manager who just bought a BlackBerry and wants to receive her business mail on it. Fish explains that the organization doesn't support personal equipment and doesn't support BlackBerries – the decision was made years ago to standardize on a different handheld. But fish offers to set up forwarding of corporate e-mail to an off-site e-mail address if the manager provides one, so it can get to her BlackBerry. "And that should be it, right?" says fish. No. Next to pop up in fish's mailbox is a request for a meeting about BlackBerry e-mail options. Fish calls the assistant to ask if she didn't get the e-mails. Yes, assistant says, but she and the manager don't understand the options. "She explains that we should know they aren't technology people, so they need it explained in simple terms," fish says. "I accept the meeting. Now we'll have to see how I can nontechnically explain, 'No, we don't support them.' Of course, if I did, could this 'nontechnical' person handle the BlackBerry anyway?"

Who Needs It?

Developer pilot fish's team creates a Web interface to retrieve some fairly sensitive mortgage data, with the help of an outside vendor. But when the client tests the interface using the credentials provided by the outside vendor, client gets a certificate error. "The URL provided doesn't match the one that the certificate was registered under, and our software returns the error," says fish. "A series of e-mails and phone calls between parties finally results in this response from a senior analyst at the third party: 'Can you modify your software to just ignore SSL host name verification errors?' Fortunately, the client stepped up and indicated this would not be acceptable."

What YouTube Is For

Hospital IT pilot fish spots a doctor's request for access to YouTube. That's a blocked site, and fish calls the doc to explain that the hospital administration is very strict about what comes though the network, because the hospital deals with psychiatric and behavioral-disorder patients. "The doctor claimed that he needed access to the site for patient therapy," says fish. "It turns out that he is working with patients with emetophobia, the fear of vomit. He wanted to get access to the site to expose patients to various videos of people throwing up in order to desensitize them to the noxious stuff. The hospital administrators agreed, and we granted him an exemption for that Web site. I just feel sorry for the tech that might have to service that particular PC."

■ *Don't fear the Shark — just send me a true tale of IT life at sharky@computerworld.com. You'll get a stylish Shark shirt if I use it.*

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Periodical postage paid at Framingham, Mass., and other mailing offices. Posted under Canadian International Publication agreement PM40063731. **CANADIAN POSTMASTER:** Please return undeliverable copy to PO Box 1632, Windsor, Ontario N9A 7C9. Computerworld (ISSN 0010-4841) is published weekly, except for a single combined issue the first two weeks of July and the last two weeks of December by Computerworld, Inc., 1 Speen Street, Box 9171, Framingham, Mass. 01701-9171.

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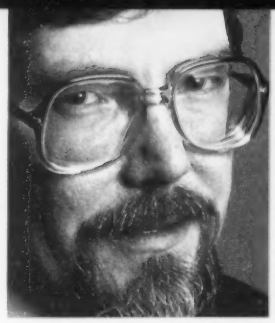
Frank Hayes

Reasons to Go



WHY WOULD ANYONE ever want to leave? As you read about the 100 Best Places to Work in IT in this issue of *Computerworld*, that's a question worth keeping in mind.

No, not about those best places — they're stuffed full of reasons why employees stay. But what about your shop? Why would your employees want to jump ship?

Look, turnover is expensive. The real cost of replacing an employee can run as high as 150% of a year's salary once you add up the costs of recruitment, training and waiting for the new hire to get up to speed, plus the lost knowledge, damaged morale and extra work that comes when any employee bails out. That's on top of payroll — it's like paying for 1.5 phantom employees for every one that leaves.

Average annual turnover for those 100 Best Places to Work? It's a mere 7% — half the industry average. Being a great place to work turns out to be like money in the bank.

OK: What are the reasons your IT people would want to leave? And what can you do about them?

Low pay. There may not be a lot you can do about salaries and raises; they're probably watched like a hawk by your chief financial officer. But you have options. Example: Stop using your bonus pool as a way of supplementing salaries across the board. Instead, pay much bigger bonuses to fewer people for specific, publicly recognized accomplishments. Suddenly, a bonus means something. Everybody on your staff won't hit the jackpot, but everyone will have a chance — based on what he accomplishes.

Boredom. Sure, our job isn't to entertain our IT employees. But if someone is actually bored, something's wrong. Maybe it's the wrong job for him. Maybe it's the wrong company. Or maybe he could be doing a lot more, but the current job won't let him. Hey, if he can polish off his week's regular work in 30 hours, reward that with opportunities for new projects, training, coaching fellow workers — whatever will motivate and challenge him.

■ Turnover for the 100 Best Places is half the industry average. Being a great place to work turns out to be like money in the bank.

No training. Yeah, we all know the excuse: If we pay for training, employees will just take that new knowledge and leave for better jobs. But with no training, they'll get fed up and leave anyway — or rot away with outdated skills. So get creative. Pay for training with loans you forgive only after a certain number of months or years. If an employee is willing to pay out of his own pocket but needs time off for training, be as flexible as you possibly can. And compare the cost of retraining a current employee with the real cost of a new hire. Suddenly, training sounds a lot more cost-effective.

Career dead end. You know all those people you can't promote out of their current jobs because you'll never be able to replace their skills — and can't pay what they're worth because they've topped out the salary range for their jobs? Put them in charge of finding and training their own replacements.

No life. Insane hours, death-march projects and exhausting demands are just the way IT is, right? Baloney. They're just signs of badly managed IT operations and projects, and they're costing you dearly. So stop the madness. There are better ways to do almost everything in your IT shop — and the people to look to first for ideas are your employees.

Would flextime make them more effective? Telecommuting? Better technology? Improved training? Things you'd never think of? Ask. Learn. Figure out what's possible, then ask some more.

Get rid of the reasons your staff wants to leave and you won't just have a better place to work in IT.

You'll have a better IT shop. ■

Frank Hayes *is* Computerworld*'s senior news columnist. Contact him at frank_hayes@computerworld.com.*

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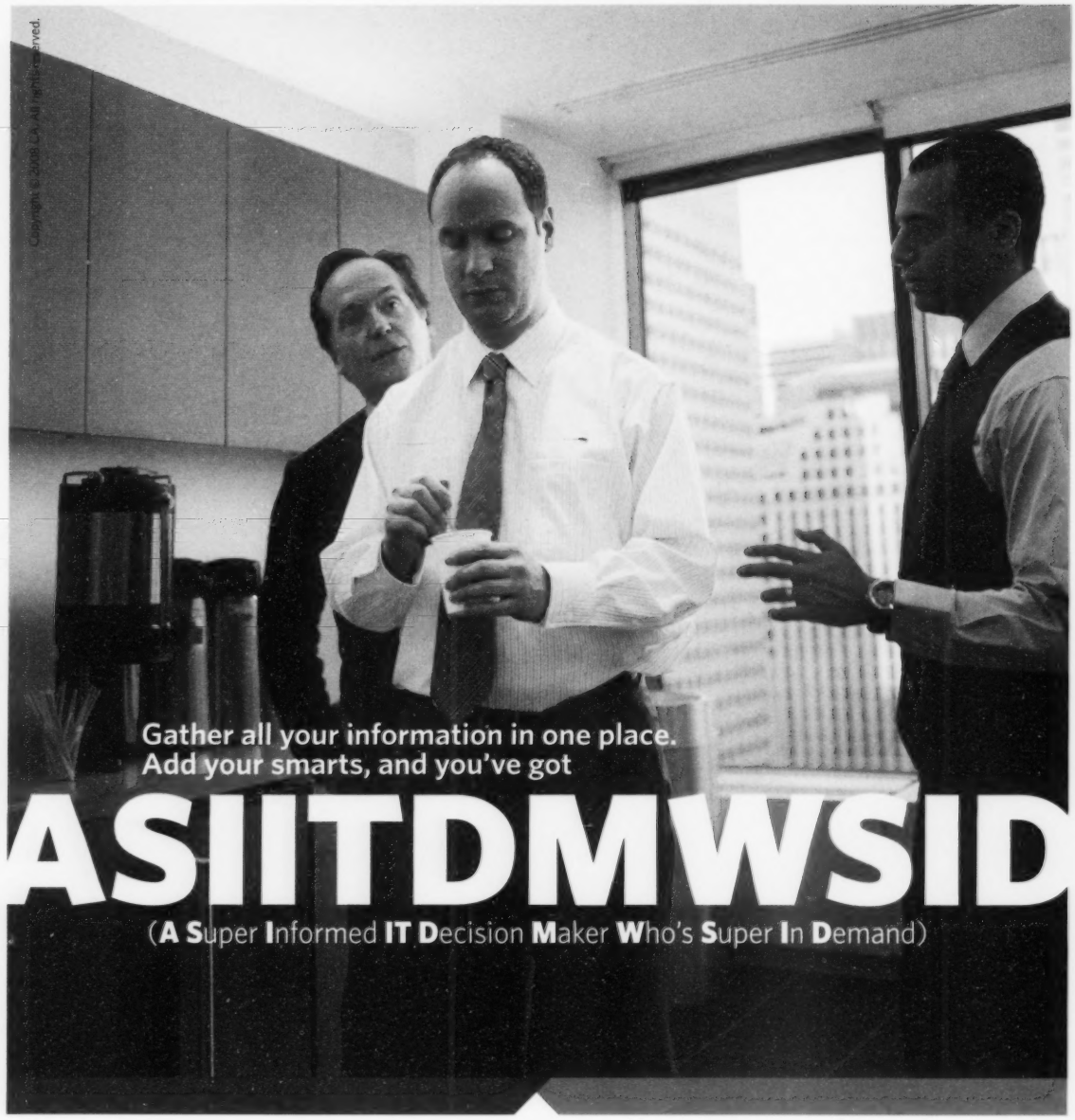
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